Palmtop

The journal for Psion computers and compatibles

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Submissions

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Contents

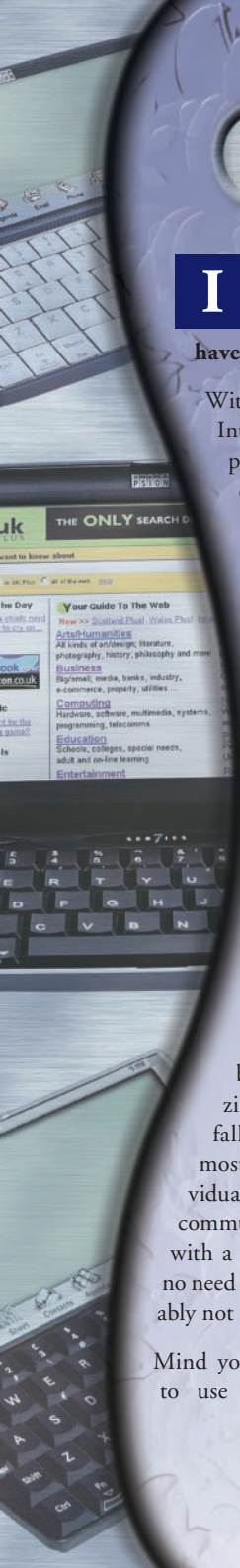
Issue 29
(Volume 5, issue 5)

Features

The Quartz crystal ball A new breed of EPOC communicators 31
Getting along with ExtraBars Utility software explored 41
Become an EPOC webmaster Build a web site with your Psion ! . 45
Maximising the Revo Software and hardware add-ons on parade 51
Email in depth The third and final part of our detailed look 59
Keeping the snoopers at bay How safe is *your* data? 65
Working for a living: the Scientist 75
The Atari Connection Connecting your Psion to an Atari desktop ... 79
Working with Word The first in a major new tutorial series 83
A brief introduction to WAP What *is* this new technology? 87

Regulars

Editorial The shape of things to come 3
Newsreel A roundup of what's happening on the Psion scene 4
Industry News What's new in the non-EPOC sector 9
Shareware Shorts Highlights from the shareware scene 10
A Closer Look The hottest new products on test 18
THREE for all Just for SIBO users 71
Competition WIN an 80MB CompactFlash disk or 4MB SSD 82
Hot tips for hot games Hone your skills with 'Team Psion' 92
On The Net Pete Sipple's Internet roundup 94
Hints & Tips More priceless nuggets for your palmtop 96
Q&A Your questions answered 100
Musings A satirical look at 'A Psion of things to come' 104



EDITORIAL

If you think the Internet has become pervasive over the past few years, you really haven't seen anything yet...

With the benefit of a permanent Internet connection, future palmtop computers will become even more 'personal' possessions than today's mobile phones, in some cases removing the need for a desk-based personal computer entirely. The palmtop of the future will be able to make and receive phone calls, handle emails, browse World Wide Web content, book cinema tickets, help you to find your way around town, and generally keep your busy life running smoothly.

I'd hesitate to suggest that this new breed of multi-function palmtop will ever become as commonplace as VCRs or dishwashers, let alone telephones, but by virtue of reading this magazine alone, you almost certainly fall into the category of "people most likely to own one". Many individuals have little to organise, few communications that can't be handled with a simple phone call or letter, and no need for the Internet—but *you're* probably not one of them.

Mind you, as palmtops become simpler to use and Internet access becomes truly straightforward, then palmtop computers/communicators *will* become more commonplace amongst the largely non-technical populace. And where do Psion, Symbian and EPOC fit into this grand scheme? The answer is (or at least should be) "very prominently". Take a look at our Quartz preview on page 31 for a glimpse at the shape of wireless mobile communicators, EPOC-style, and the *TomTom* supplement on pages 36-37 to see what kind of software content might be available to complement this exciting new hardware.

The whole world of mobile computing is in for a major shake-up over the next few years, and it's heartening to see that EPOC is likely to remain a major player.

Steve Clack - June 2000

Palmtop is...

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Thanks... to all the other contributors whose names appear within *Palmtop* and those who have kindly supplied products for evaluation.

Series 5 cartoons - Carl Reader

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NEWSREEL

What's new in the world of EPOC

New Revo Internet Pack

Psion Computers has bundled the Revo and Travel Modem into a single package, calling it their 'Internet Pack'. It will be available in the UK through Psion's traditional retail channels, from mid-June, at a recommended price of £399 including VAT.

www.psion.com/index_computers.asp

PsionLife is reborn

Psion's 'bi-weekly' email newsletter, discontinued in 1999 after numerous delivery problems, has been reborn—on the web. There's still an email component though, sent out monthly and summarising the newsletter content. Psion are encouraging everybody to log in and update their details, with all their subscribers entered into a draw to win a Series 7.

Sketch on the Revo, courtesy of Paragon

The PsionLife web newsletter contains sections for news, product updates, special offers, user stories, hints and tips and a general knowledge competition (with prizes).

www.psionlife.com/uk

Sony licenses EPOC

Sony has licensed EPOC for its next generation wireless phones. This combination will appeal to mobile users who want a single device that can make phone calls, access the Internet and run advanced multimedia content and services.

Incorporating leading technologies such as Java, Bluetooth and WAP, Symbian has already licensed the EPOC platform to industry leaders such as Psion, Nokia, Ericsson, Motorola, Panasonic and Philips.

www.symbian.com

Type I microdrive

Halo Data Devices have announced the smallest, lightest and thinnest hard disk drive ever developed. The Halo microdrive fits any *Type I* CompactFlash slot and should be compatible with the Series 5/5mx, etc. Just 3.3mm in height, it weighs approximately 10g and can store 250MB of data. We'll be reviewing this disk as soon as a production sample is available.

www.halodata.com

Sketch for the Revo

Paragon Software have ported Sketch across to the Psion Revo, so you can now create and view Sketch objects in the same way as on larger EPOC devices. For more details and comment, see page 52.

www.penreader.com/products.htm

GPS improves overnight

At midnight on May 1st, the US government ordered the deliberate hampering of GPS signals to be switched off, in response to years of consumer pressure. Until now, all GPS signals were subject to a small random error, imposed to stop enemy military units using the USA's own system against them, which limited GPS accuracy to around 20 metres. With the random error removed, accuracies are now in the two metre range, almost anywhere on the earth's surface.

Used in conjunction with the super-accurate maps in Street Planner (reviewed in issue 27), it's now possible to show a moving map on your palmtop that's precise enough to tell whether you're in your house or garden!

SyncML taking off

The SyncML initiative is committed to developing and promoting a new open industry initiative that will make the synchronization of remote data and personal information consistent across multiple networks and devices. Psion, one of the founders, has announced that the official Supporter program has reached a milestone of more than 150 registered supporters. Each of these now have access to an Architecture White Paper on the SyncML web site and, as a result of aggressive schedules in development work and wide support in the industry, the initiative now expects a variety of SyncML-compliant products to be on the market as soon as early 2001.

www.syncml.org

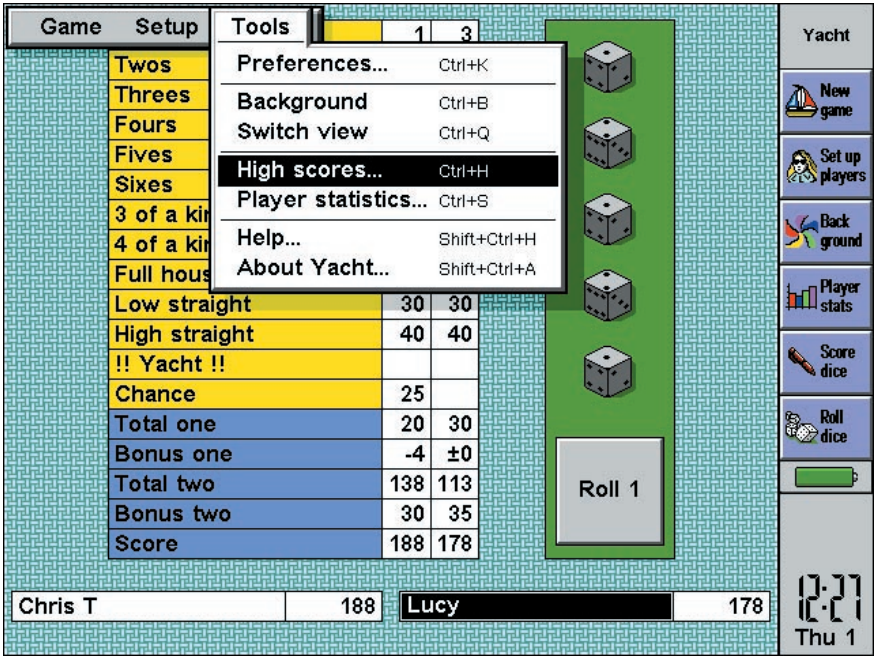
BubbleJets in colour

A new version of the third party Canon BJC-80 printer driver is now available, including support for colour printing from the Series 7 and netBook and a host of other improvements for black and white use. The driver also works on the Canon BJ-10sx, BJ-30, BJC-50, BJC-70, BJC-85, BJ-200ex, BJC-250 and BJC-4550 and the Epson Stylus Colour II.

www.aps.anl.gov/~anj/bjc80

Purple Software games

Purple Software has launched a volley of new games, available by electronic download only. Yacht is an EPOC port of Yahtzee, a challenging dice game for Poker fans. HomeRun is a port of the card-removing



patience game originally included in the ROM of the Series 3c and 3mx. Both are priced at £15, including VAT. FlipFlop is another card solitaire, but made available as freeware.

As with all Purple Software products, the games are of full commercial quality and include such features as multiple player options and views, statistics screens, full online help and hidden bonus levels.

Purple has also announced that they have bought out Oxford Softworks, one of the world's leading developers of strategy games software, with an eye on producing new online games for the forthcoming WAP smartphones and EPOC communicators.

www.purplesoft.com

Eudora Pro link up

Advansys have released eSync 2000, Qualcomm Eudora Pro Edition. Seamlessly integrating with PsiWin, this provides an easy and efficient way to synchronize Eudora Pro 4.x email (including attachments) with the standard email client on any supported EPOC palmtop.

www.advansyscorp.com

P-Plus Bridge goes colour

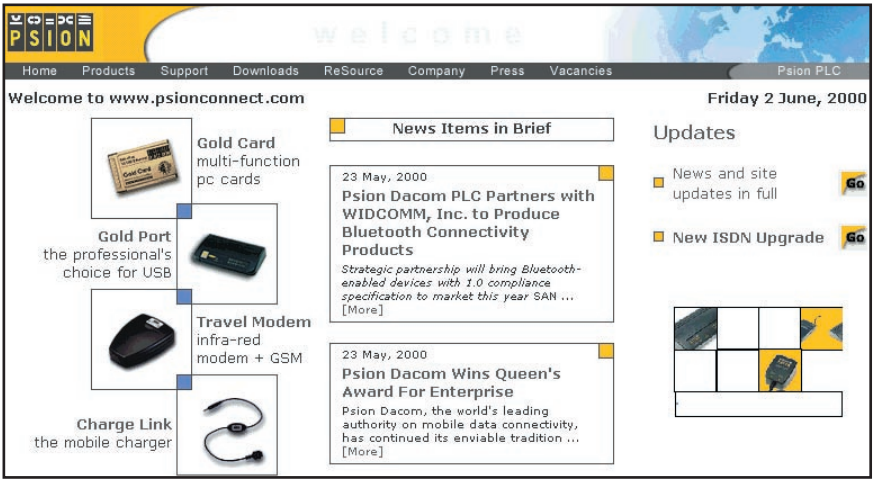
Breva Software have released a new version of their popular P-Plus Bridge, running in colour on the Series 7/netBook and scaling down properly on the Revo.

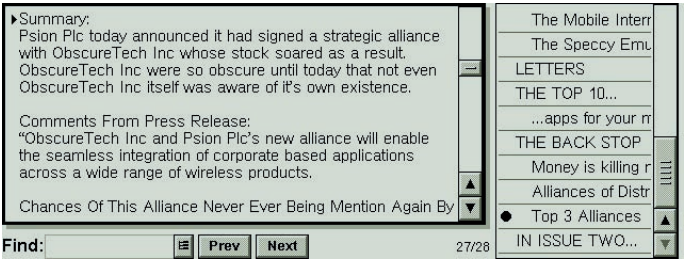
www.breva.co.uk

Goodbye Psion Dacom, hello Psion Connect

In a move which reflects the ever-changing world of computer communications, Psion Dacom has been renamed to Psion Connect. Over and above the traditional Dacom modems, the new company is likely to provide a wider range of communications accessories.

www.psionconnect.com





A little Psion-related satire, with 'Your EPOC'

Professional book in reprint

Professional Symbian Programming, which we reviewed in issue 28 and which is published by Wrox Press, has sold out *twice* and now gone into its third print run.

www.symbian.com/technology/publications/symb-book.html

Online publication launched

Ewan Spence and Jody Armstrong, two of the EPOC world's most outspoken figures have launched a new online monthly publication called 'Your EPOC', featuring reviews and comment.

www.yourepoc.co.uk

Pdf pictures

Version 0.80 of Pdf, the freeware PDF viewer for EPOC, is now available. By far the biggest enhancement is the display of pictures. Other improvements include a more robust interface that can handle interruptions while rendering, translations to French, German and Dutch, and a number of major bug fixes.

www.xs4all.nl/~svdwal/Pdf/Pdf.htm

Revo cased

Palm-Tec has revealed the latest addition to its range of highly protective cases. The 'Shell' is a purpose injection moulded hard case for the Psion Revo and features the same rigid ABS plastic outer shell and smart hand-fitted foam lining as their 'MBC' cases for the Psion Series 3 and Series 5 palmtops. The 'Shell' has a sleeker and more rounded design, reflecting the shape and style of the Revo. See page 57 for more details.

www.palmtec.com

New thesaurus titles

Alphasoft has added an editable Thesaurus to their TrueTerm range of dictionaries. The Thesaurus includes around 200,000 words and expressions with features such as keyword search, fast access to synonyms and the option to create your own user dictionary. Compatibility with existing TrueTerm products means that you can use both Dictionary and Thesaurus together. Versions are available for English (separate UK and US versions), French, German, Italian, Dutch, Portuguese, Swedish and Spanish. Titles are priced at $30 each, and we'll be including a full review in the next issue of *Palmtop*.

www.trueterm.com

INDUSTRY NEWS

In this regular feature we devote a single page to what's happening in the non-EPOC sector of mobile computing...

Microsoft has officially launched the new Pocket PC platform. Aimed squarely at users of palm-size devices, the new software will initially be employed by Hewlett-Packard, Casio and Compaq, who are all part of the Pocket PC initiative. Casio has been the first to launch a new device powered by the new operating system, the Cassiopeia E-115, which is based on the popular E-105 Palm-size PC, which it replaces. As well as incorporating the new Pocket PC applications which offer enhanced support for sound and video, the E-115 comes complete with a host of additional software, 32MB of RAM and a CompactFlash backup utility.

Other new Pocket PC devices include the iPaq from Compaq and the Jornada 540 series from Hewlett-Packard. Priced at £369, the newly designed Jornada 545 comes with 16MB of RAM and an emphasis on multimedia capabilities. The 548 is almost identical to the 545, but has 32MB of RAM and is priced at around £439.

Samsung is to enter the mobile market shortly with the Yopy, using the Linux operating system. The Yopy will have a colour display and will be the first mobile Linux device to be released in the UK. It will feature a built-in radio and MP3 player, and will offer support for Internet access via a mobile phone.

NEC Computers has announced a new sub-notebook mobile device. The MobilePro 880 is supported by the latest version of the Windows CE Pro operating platform and includes 32MB of RAM, USB port, 800x600 SVGA colour display, 168MHz processor and a built-in modem.

Another new Windows CE device set for release later this year is the Cognito C21, a shock resistant device aimed at the corporate market. The C21 will feature a built-in radio to enable communication between mobile and office staff, a touch sensitive screen and a 30 hour battery life. As well as being able to access and update company Intranet sites, users of the new device will be able to browse the Internet and send and receive email.

Andy Nott

Shareware Shorts

Steve Litchfield, maintainer of the 3-Lib shareware library, takes a look at the latest additions to the world of Psion shareware...

It's now been a couple of years since the SIS installation format was launched by Psion, and although I complained at the time (SIS files are not compressed and so still need to be zipped up to save download times) I'm now convinced they've been a major factor in the success of the EPOC shareware scene.

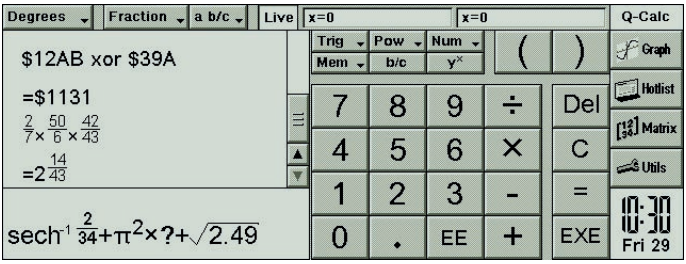
In case you haven't come across SIS files before, perhaps because Windows on your PC hides file extensions from you, they're also known as 'EPOC installation files' and double-clicking on them is about as complicated as installing a new program usually gets. For most people, they're certainly a huge step forward from copying across directory trees when installing software for the Series 3 range.

If you're a shareware author and you *don't* package up your software in SIS format, then you need to wake up. Most software archivists, myself included, will automatically consign new programs to their 'vault' area if they don't see an easy-to-use SIS file. And if you want to keep us really happy, supply an accompanying README.TXT file with a description of what the program does—it's amazing how many authors just ship the SIS file with nothing whatsoever to say what it is or where it came from.

Certainly all the software mentioned in this column comes in SIS format, so there really is no excuse for not trying at least some of it out. Many of the programs mentioned in here over the past few years have also been retro-fitted into a SIS installation file, and of course the *Palmtop* CD is being kept stocked with all the latest updates and revisions.

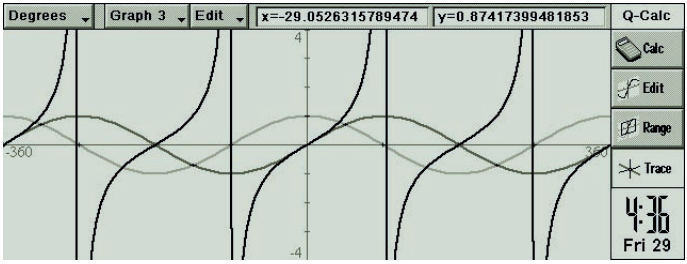
Advanced calculation

Graham Parks, a long-standing Series 3 author, has made the jump to EPOC with a vengeance—his *Q-Calc* is now available for the Revo and Series 5-class palmtops. It has a lot more features than the built-in calculator, including an advanced screen display and full fraction, hexadecimal and binary support. A history list provides easy access to previous calculations and results and a hot-



Q-Calc, a super-advanced graphical calculator...

...and a capable function plotter

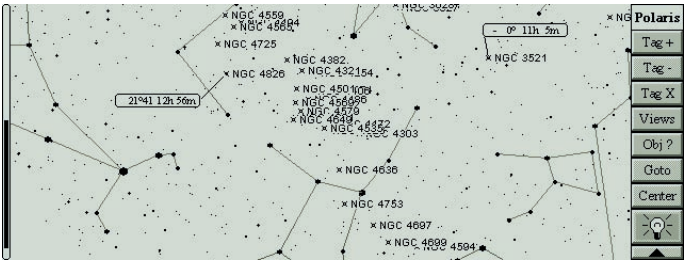


list is provided for frequently used operations. Live calculation displays the answer to an expression as you type in 'real time', and an evaluate option simplifies the entering of complex calculations.

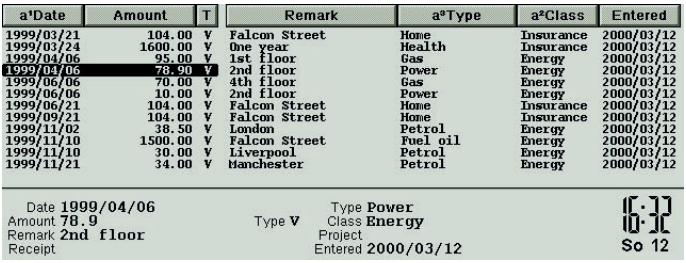
Q-Calc shows expressions the same way they are written, with powers as superscripts, etc. Expressions can be exported as Sketch files, so with a little lateral thinking Q-Calc can also be used as an equation editor for Word. It can also solve simultaneous equations and quadratics, as well as finding gradients and converting between rectangular and polar coordinates. The matrix calculator can multiply, add, subtract and divide, as well as transposing and inverting. An integrated function grapher can show up to six graphs simultaneously, and will find y values, intersects, minima and maxima, also exporting to Sketch if needed.

Reaching for the skies

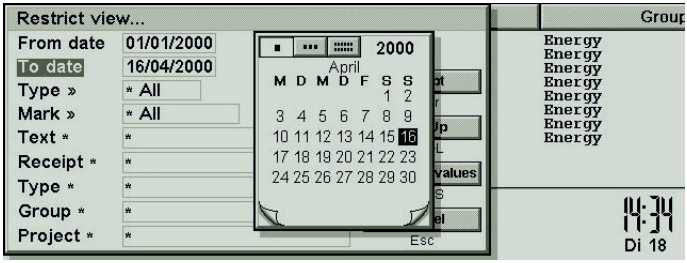
Also now available for EPOC, in English and French, is **Achay Doan**'s *Polaris* astronomy suite. This is suitable for star gazers and



Viewing the night sky with Polaris



xPen in action



Applying an xPen filter

amateur astronomers who want to know which celestial bodies are visible from a chosen spot, at any given moment in time. 16 zoom factors are available, allowing you to select different-sized portions of the sky. The database includes over 10,000 principal and secondary stars (and their proper names for constructing the constellations), all 110 Messier objects and a planetary position module.

Not xPensive

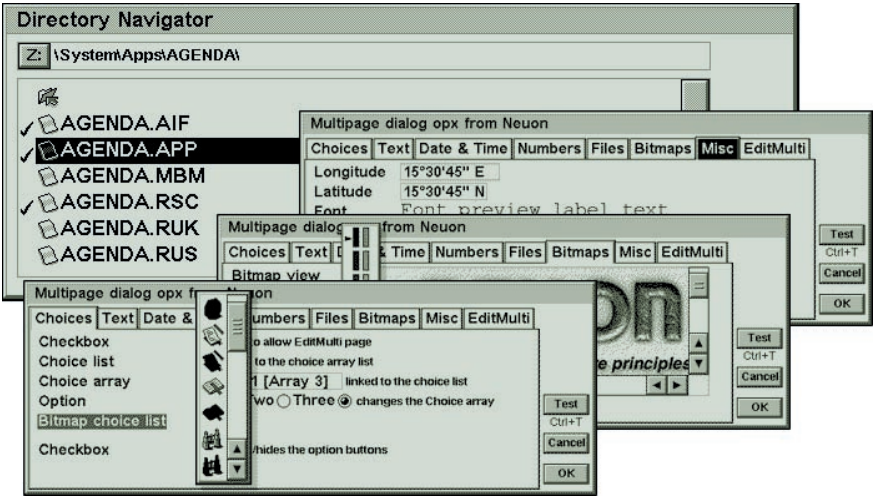
A name to conjure with, **Lorenz Binggeli** has released *xPen*, in both English and German. It's a comprehensive expense manager for private or business use, including a number of summary screens and featuring a graphical time-axis to help you navigate your data. Notes can be appended to each entry and popped up when needed.

Confidential information is protected with CAST-256 encryption and decryption and memory requirements are kept to a minimum by using compression for all xPen databases. Perhaps most importantly, you can set up custom views, containing only the data of specific interest to you at the time, using the built-in filters and sorting functions.

Programming wizardry

The face of OPL programming is changing rapidly, whether you're an amateur or professional programmer. Shareware house **Neuon** are the ones who've made the difference, with a series of intricately clever OPX modules that can be supplied with and used by your program. They're all written in optimised C++ too, so they run at the speed of the built-in EPOC applications.

In recent months, Neuon have released modules for handling scrollbars, multi-page tabbed dialogs, graphical choice lists and dynamic directory navigation. At the risk

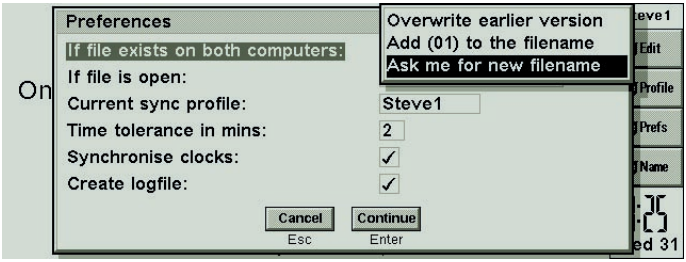


Neuon OPXes giving OPL a face-lift

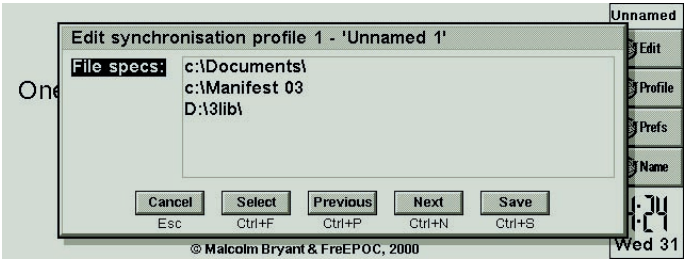
of sounding like an advertisement for the company, every budding programmer needs to take at least a quick tour through *www.neuon.com* .

Keeping in step

With the arrival of the Revo and Series 7, at opposite ends of the size spectrum, owners are having to face a new and unique

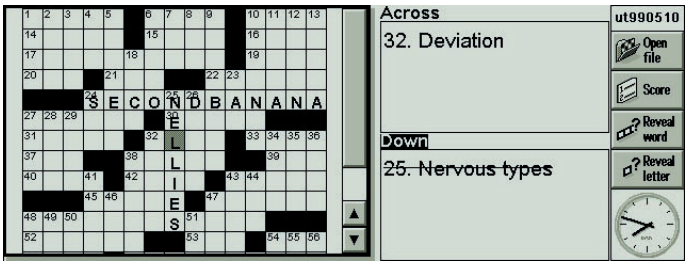


Setting up preferences in EpocSync



Selecting files and folders to synchronise with EpocSync

Stretching your brain in RMR Crossword



problem. When owning more than one EPOC palmtop, how do you keep your important files in synch? It's all too easy to overwrite a newer copy of a file with an older one from the other computer and there's therefore a definite need for something more automated.

Enter *EpocSync*, stage right. Released as freeware by **Malcolm Bryant** (the author of ABP) and **FreEPOC**, this offers automatic synchronisation of selected files and folders between two EPOC computers. It's easy to set up saved profiles of file and folder sets (e.g. "Home", "Work", "Book", etc.) and synchronising the set is then as easy as positioning the two palmtops so that their infrared windows face each other, then tapping one on-screen button.

It's important to note that EpocSync only works with entire files or folders—there's no synchronisation at individual record or entry level, so you can't change a file on both computers and expect the utility to somehow detect and merge the changes. It's still a big step forward though and very welcome indeed. We'll be reviewing it fully in the next issue of *Palmtop*.

Criss-cross

RMR Crossword is a new crossword playing tool (from **RMR Software**, of course) with an intelligent interface that should make game playing faster and more intuitive. For example, clues are automatically tracked and crossed out when completed, incorrect letters and words are automatically highlighted and there's a 'cheat' feature to save you tearing *all* your hair out. It also provides direct access to EPOC's built-in Spell application so you can quickly check on words you're not sure of.

RMR Crossword can import all of the popular Internet puzzle formats, which means you have a choice of literally thousands of free puzzles by following the links from RMR's Crossword web page. Partially completed puzzles can be saved and restored as needed, at any time.

Revomania

Continuing the conversion of existing EPOC games to run properly on the Revo (not an easy task due to all the graphics work needed), **Ben Vaughan** has recently released *Psi-Jong*, in which you remove duplicate sets of Mah-Jong tiles from a very

FEATURED UPDATE!

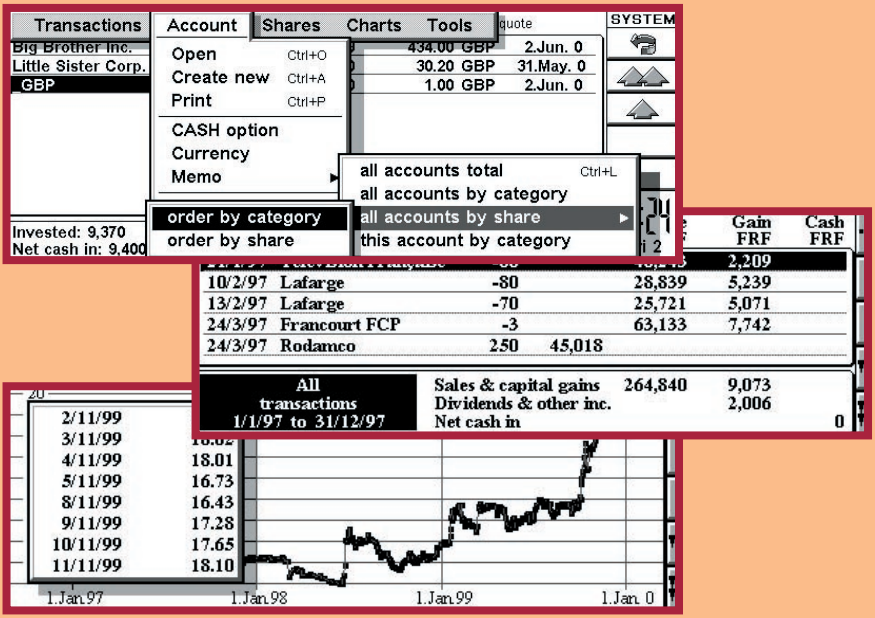
Porfolio

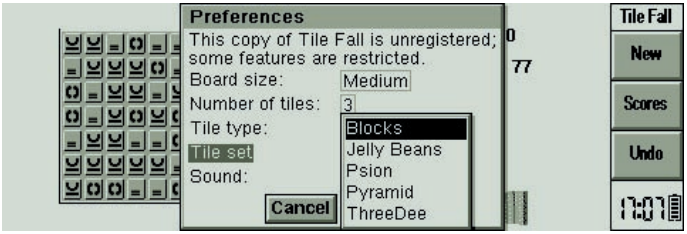
Guillaume Dupont's *Porfolio* stocks and shares management package is perhaps most famous for the spelling of its name. But it's also one of the most professional and regularly updated applications in the Psion and EPOC world. You can create a list of shares, indices and currencies, opening one or more accounts.

Each account can have its own currency, perhaps different from your main currency. You then record transactions in each of these accounts: share purchases and sales, cash or share transfers, dividends, share splits, share options, dividend reinvestment, and so on. By recording the day-to-day value of indices, quotes and exchange rates, you can keep track of your holdings, reporting their values in a variety of different formats. Once set up initially, the daily or weekly maintenance isn't too onerous.

Porfolio is well presented and highly polished, with welcome example share data, to help beginners see how the program works. The menus are comprehensive and well laid out, and the author's experience with his SIBO version has obviously paid dividends.

Most language variants of Porfolio (English, French, Italian and German) are now up to version 5.11. New in recent releases is the addition of IRR calculation, a redesigned interface to allow access to more parts of the program from within more displays, plus the compacting of Chart files automatically as and when required.





Options, options and more options with TileFall

Asteroids—as good as the original

graphical playing field, and *War*, in which you plan suitably violent campaigns against a computer-controlled enemy, with tanks, planes and so forth at your disposal.

Neuon have embraced the Revo with truly open arms. *TileFall* scores over the similar Cascade (in the Revo's ROM) by virtue of being far more configurable, *Asteroids* offers a quite remarkable smoothness of animation on the Revo's LCD screen, and their Castle III is a full RPG adventure despite the tiny Revo guise.

Shareware availability

Please note that, by definition, many of the latest items featured in Shareware Shorts will *not* appear on existing Palmtop CDs, but on subsequent pressings of the disk. If you wish to receive every edition of the Palmtop CD then see page 141 for details.

For those with Internet access, an easy way to find software is to go to our 'Programmer directory' at *www.palmtop.co.uk/authors.htm* and look up the name of the author as highlighted in **bold** in this article. This will take you to the author's web site, from where you can find out more about the product and download it directly.

The vast majority of EPOC applications mentioned in Shareware Shorts run properly on the Psion Series 7, Series 5/5mx, Revo and compatibles, unless otherwise stated. If a program misbehaves on *your* EPOC computer, check the author's web site first and then email them if necessary.

Programs not immediately traceable via their author's web page can all be found at *3lib.ukonline.co.uk/psifind.htm*

What is shareware?

Written by professional programmers and enthusiasts to meet specific (and sometimes unusual) needs, shareware is often supplied for use on a thirty day trial basis. If you like the software you are then asked to send a payment to the author. Some programs are freeware and don't require any payment at all. Each program comes complete with information about how to install and use it, and how to pay for it.

Where can I find it?

One way to get any of these programs is from the Internet. If you've got access to the web there are several on-line indices which link directly to the relevant author download page concerned.

Things are actually even easier if you haven't got Internet access. As long as the program concerned has been out for a month or so, you should find a copy on the latest edition of the Palmtop CD-ROM, indexed into the appropriate category.

How do I use it?

Once you've found the file you want, there are three steps you may need to take:

1. Decompress the files if necessary. If you're new to computers you may not be familiar with compression. Psion applications normally have more than one component (e.g. the program itself, help files and pictures). These are normally compressed into one file, which makes them easier to distribute. Shareware on the Internet is most commonly compressed in 'Zip' format, and you can recognise these by the '.ZIP' at the end of the filename. Before you can install and run the program you need to extract these files with an 'unzip' program, which is freely available from your shareware supplier. If you use DOS, look for PKUNZIP, Windows users can use Winzip, and Mac users should try ZipIt or the commercial Stuffit Deluxe. You can also unzip files on your Psion without using another computer, using RMRZip, from www.rmrsoft.com .

2. Copy the files. You'll probably now need to transfer the unzipped files onto your Psion. To do this you'll need some external hardware, such as the PsiWin or EPOC Connect link cable. Normally one of the unzipped software files is a text file (e.g. README.TXT), which can be read by any word processor. It explains how the program should be installed and where the files need to be copied to on your Psion. Look out for any special SIS files, which can be double-clicked on for really easy installation.

   See 'The Installation Game' in issues 14/15 and 'Installing software - the easy way' in issue 21 for a more comprehensive discussion of the above procedures.

3. The newly installed program will automatically appear on the Extras bar. Press the 'Extras' application icon to check and to launch the software.

A Closer Look

...at some of the newest and most interesting products for your palmtop

Star Ratings:

★★★★★	Excellent
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Fair
★☆☆☆☆	Poor
☆☆☆☆☆	Dismal

Interpreting reviews

Quality: the *Quality* star rating reflects how well the product works, whether it includes all the features you'd expect, whether the interface is consistent and easy to use, and in data-based software products it also reflects the quality of the information contained in the program.

Value: the *Value* star rating reflects the value for money of the product, taken within the context of what the program (or other product) does. Therefore a simple utility program will be rated differently to a sophisticated application at the same price.

Items reviewed should work with the Psion Revo, Series 5/5mx, Series 7/netBook and Ericsson MC218 unless otherwise specified, though some programs may not currently support colour or utilise the full screen of the Series 7 and netBook.

Programs *may* run on the Oregon Scientific Osaris, though part of the display may be clipped due to the Osaris' smaller 320x200 pixel screen. Osaris users should always consult the program developer before purchasing.

My Pocket 19

Offline Web 22

TomeRaider 25

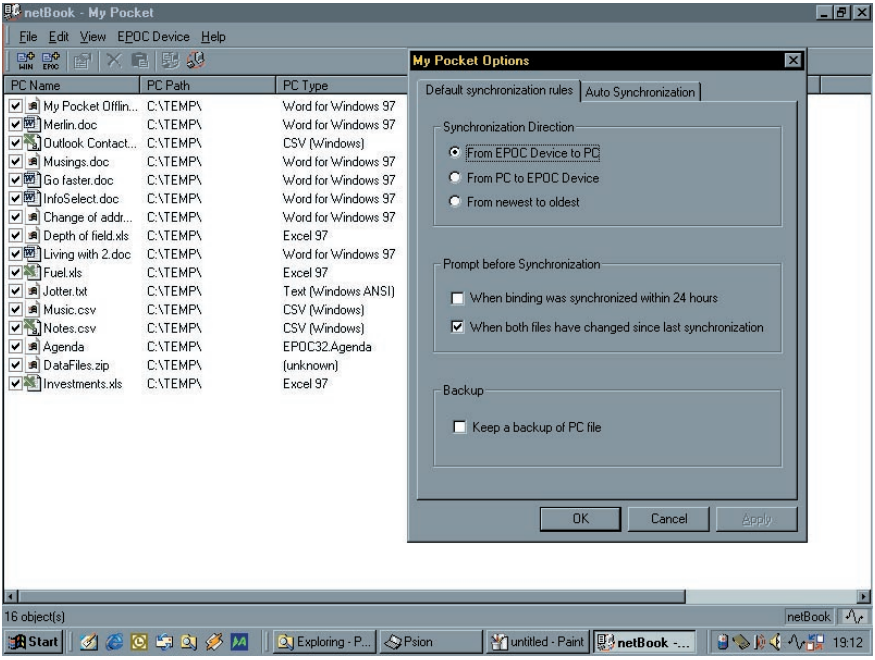
Merlin 27

My Pocket

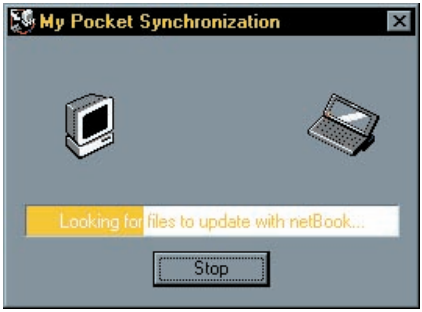
I have access to several computers in my work as a writer, and at any given time I'm working on several articles with copies on both my desktop computer and Psion. Remembering which ongoing work is the most recent can be difficult, and on several occasions I've accidentally overwritten current versions with older ones. Software to ensure synchronisation between the two computers is sorely needed. I thought my prayers had been answered when Ericsson originally released My Pocket to accompany their MC218. Unfortunately, it would only work with their own version of PsiWin, but now the original authors, Palmtop Software, have released a version for use with other EPOC machines.

Like its sister utility, Offline Web, My Pocket runs on a Windows PC. Its job is to ensure that documents stored on both your Psion and PC are synchronised correctly. Thus you should be able to make changes to a document on either machine, which will then automatically be reflected in the copy on the other after they've been synchronised.

In order to use My Pocket you'll need PsiWin 2.0 (or higher) installed on a Windows-based desktop, plus any EPOC palmtop. The reliance on PsiWin means that it's only possible to synchronise documents that are supported by PsiWin's built-in convertors. In this respect, it's best to be using the latest version (2.31 at the time of writing). Sensibly, the already somewhat



Setting up options for My Pocket on the PC

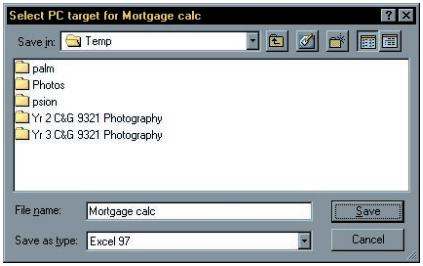


My Pocket in action

shaky synchronisation of Agenda files and Email is not handled by My Pocket. This is left to PsiWin's own mechanisms in order to avoid unwanted clashes.

Setting up is easy. You create a master list of documents that are stored on either computer, specifying location, file name, whether or not conversion is to take place and in which direction. If the equivalent documents don't already exist on the other computer then they'll be created during the first synchronisation. Subsequent synchronizations are done either automatically on a daily or weekly basis, or whenever the Psion is connected. You can also action it manually if you prefer, which I do. Over-reliance on automation is, to my cynical mind, an invitation to mischief.

The link between a document on the Psion and its mirror on the PC desktop is called a *binding*, and it's important that this isn't broken. For example, it can be broken if you change the name of a file, confusing the synching process because My Pocket will no longer know what to synch to. Fortunately, My Pocket is well mannered in this respect, telling you if a binding is inadvertently broken and prompting you for action.

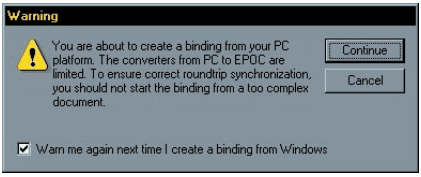


Creating a binding

A feature that I found particularly useful is the selective backup of important files. To do this you specify that you don't want to convert these files during the synchronisation process—they will then still be copied to the desktop. Backing up a few files in this way is much quicker than using PsiWin's disk-spanning operation and I now tend to use My Pocket for this instead.

The concept is good and the product is sound. It works well once you understand the limitations imposed by PsiWin, which is the weak link in the chain. Depending upon your point of view, the results can be quite hilarious. Keeping simple documents synchronised is no problem, but PsiWin often makes a complete mess of formatted documents or those with embedded objects. By the time a file has been through PsiWin several times it can be well and truly mangled—you might as well not have bothered at all.

For example, I keep a daily log of my work activities on my Psion 5mx, in a Word file with embedded Sheet and Sketch objects. Using My Pocket, I synchronised this, entailing conversion to Microsoft Word format. When I opened the file on the desktop I found that all the Sheet objects had been left out during the conversion and



A friendly warning

that Sketch objects were resized or truncated. While on the desktop I then added a few lines of text to the document before re-synchronising back to the Psion. This of course caused the file to be converted back to EPOC Word format. When I re-opened the file on the Psion there were no Sheet objects at all and the Sketch objects were a mess. And as the synchronisation process overwrote the original file on the Psion I lost important data. If a Record sound object were included in the EPOC Word file then the conversion process would fall over completely, destroying the copy on the desktop.

Little of this is the fault of My Pocket, being mainly down to PsiWin's poor conversion routines. To Palmtop Software's credit they make very specific and clear warnings in the help file about the possible problems.

By contrast, Sheet files were far less troublesome because they don't support object embedding. Graphs won't get carried over by PsiWin's conversion process though, and more ambitious users might experience difficulties with complex calculations or functions. I had no problems keeping simple spreadsheets synchronised. You should also be aware that Excel workbooks with multiple worksheets will only have the first one synchronised, a limitation of both PsiWin and Sheet.

To avoid the conversion chaos mentioned above it's necessary both to ensure that the synchronisation rules are correctly set and to avoid including objects or complex formatting—finishing touches can always be added at the last minute before final printed output on either palmtop or desktop. My Pocket's synchronisation rules govern whether the process is two-way between the desktop and Psion, or one-way, from one to the other only.

When (or if) PsiWin gets fixed then My Pocket could well be a 'killer' application. At the moment it's hampered by PsiWin's own limitations. You may still find My Pocket a useful addition to your armoury, especially if you do a lot of work on the move. Given that Psion like to advertise that you can keep your office on a Psion, My Pocket (or something like it) should really have been included within PsiWin in the first place.

Nigel Wright

My Pocket

From: Electronic download from *www.palmtopsoftware.com*

Availability: Now

Runs on: Windows PC/all current EPOC models

Price: $24 (around £15)

Quality	★★★★☆
Value	★★★★☆

Offline Web

Composing, reading and sending email from a palmtop is both attractive and immensely useful for many people, but the web browsing experience is often much less enthralling. Hardware limitations aside, the poor performance of EPOC's Web application means that online browsing can be hard work, time consuming and expensive.

Offline Web is a Windows PC-based desktop application designed to retrieve web content for subsequent *offline* browsing on an EPOC palmtop. It's an attractive idea because it has the potential to offer significant savings in both your time and phone bill. In theory, it makes it possible to browse anytime and anywhere, without a network connection.

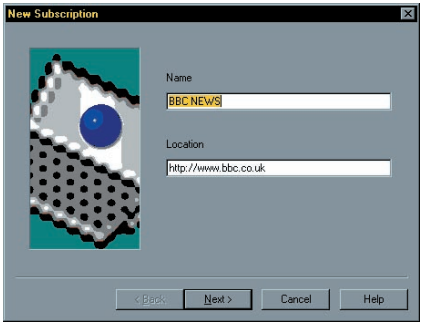
Offline Web works by using your PC's fast Internet connection to download web site content, which is then synchronised over to the Psion. You need to be running Windows 95/98/NT4.0, Internet Explorer 4.0 or better, PsiWin 2.x and have a web browser installed on your palmtop.

To download from a web site you need to create an Offline Web 'subscription' first—there's a wizard which prompts you for the necessary information such as title, web site address or URL, maximum content size and how far into the site you want to go.

Depending upon how the default options are set, the download might also contain additional elements such as sound, video, applets and attachments. Naturally these increase download times and are mainly of dubious value on a palmtop, so I configured Offline Web's default settings to include only the pages themselves and any associated images. If you wish, these can be set independently for each individual subscription, increasing or reducing the content according to whether or not the site is Psion-friendly.

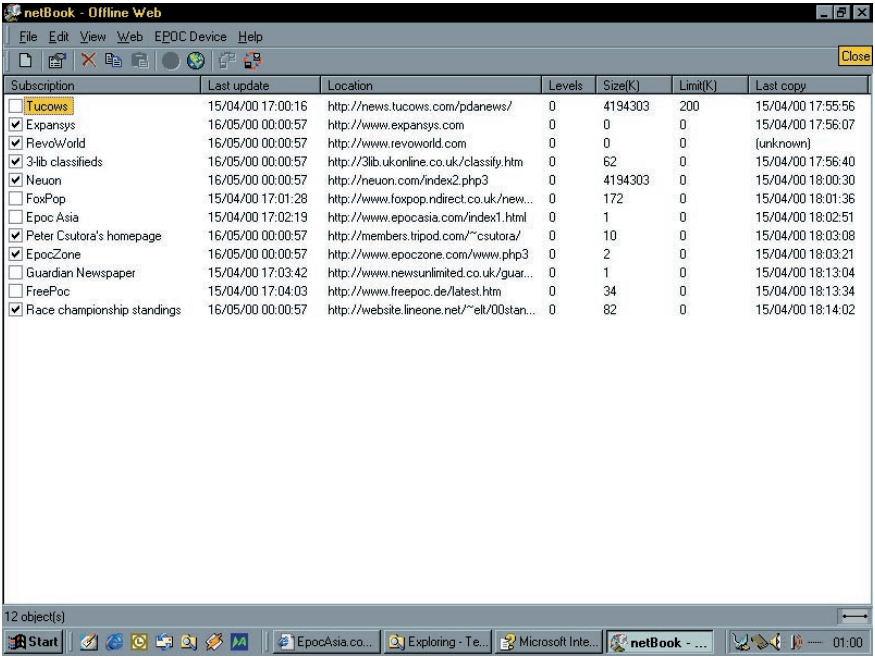
Offline Web can cope with web sites that require a user name and password, although this doesn't allow access to secure sites such as those used by banks. The most important setting is the one that limits the amount of content to be downloaded, and experimentation is needed to find the right configuration for some web sites.

Once a subscription has been created, it's time to go online and fetch the web content by establishing an Internet connection and asking Offline Web to update all its subscriptions. When the download is completed you



Creating a new subscription

Synchronising web content to the Psion



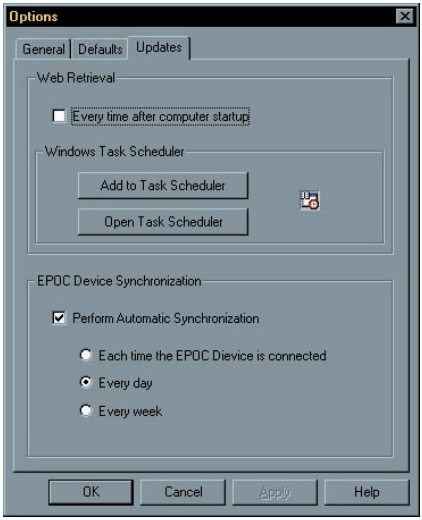
A PC screen showing a list of 'subscriptions' to be updated on the Psion

simply synchronise the content to the EPOC palmtop. This process creates an index page called START.HTML in C:\Offline Web on the palmtop, containing hyperlinks to all the downloaded content specified in your subscription list. Usefully, the content can be stored in any location you choose—a good thing if your internal disk is a bit crowded.

Viewing content on your palmtop is just a case of starting your browser and navigating to START.HTML. I used both Opera (reviewed in issue 28) and the built-in Web application successfully to do this, and by making it my default homepage was able to make navigation a breeze. Alternatively, you can just create a bookmark in the usual way.

This might all sound rather involved, but the whole process is actually very simple and the developers have thoughtfully provided the means to fully automate it using Windows' Task Scheduler. In this way you can go online, retrieve the content, disconnect and then synchronise in one smooth hit, all of which Offline Web did fairly reliably.

The principle behind Offline Web is good, but there are some rough edges. Whenever I started the program it insisted on starting the PsiWin connection server, causing trouble if another application or device was using the serial port at the time. Moreover, if the Psion palmtop was already connected to the PC via PsiWin, Offline Web would fail to recognise this and promptly hang. The only workaround I could



Offline web scheduling

find was to close the PsiWin connection and restart Windows without the PsiWin connection server, and allow the connection to be made by Offline Web.

A limitation for people with more than one Psion is that it's not possible to establish a reusable profile of subscriptions. I'd like to use the same set of subscriptions for all my Psion palmtops (Series 7, Series 5mx, etc.), but I was forced instead to recreate them for each unit.

Another problem was that downloaded attachments (such as Microsoft Excel and Word files) weren't automatically converted to Psion formats. Offline Web also appeared to have trouble handling web sites that use frames, often omitting content in its entirety.

Although it did work reliably with the simplest sites, I was disappointed by the variable results achieved and would hesitate to recommend it until these issues are fixed.

Nigel Wright

Offline Web

From: Electronic download from *www.palmtopsoftware.com*

Availability: Now

Runs on: Windows PC/all current EPOC models

Price: $24 (around £15)

Quality	★★½☆☆
Value	★★★☆☆

TomeRaider

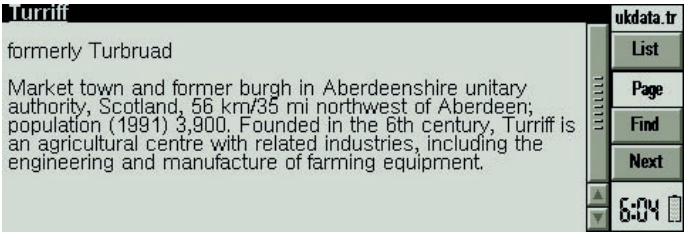
Needless to say, TomeRaider is *not* a port of the popular *Tomb Raider* adventure game, but it might take up at least as much of your time. The reason being that it gives you access to a huge range of electronic texts and databases, including novels, dictionaries and encyclopaedias. Some of the novels are fairly small, but the major reference works can be up to 15MB in size. Needless to say, a few of these will rapidly swallow up your available disk space.

TomeRaider was covered briefly in issue 28 of *Palmtop*, where it was described as being better suited to reading reference texts than as a true electronic book reader. Working happily on all screen sizes from the Revo through to the Series 7, the latest version (2.06) now does most of the things you'd expect of an electronic book reader. It compresses texts into its own unique file format, with the new version increasing the compression ratio even further, as well as providing internal hyperlinks. So far there are very few files available that make use of this feature, but the hyperlinking is potentially wonderful for cross-referencing a dictionary and compiling a table of contents. Old files made for version 1.x of TomeRaider are automatically converted to the new format the first time they are launched. This happens almost instantaneously, allowing you to then open the file as normal.

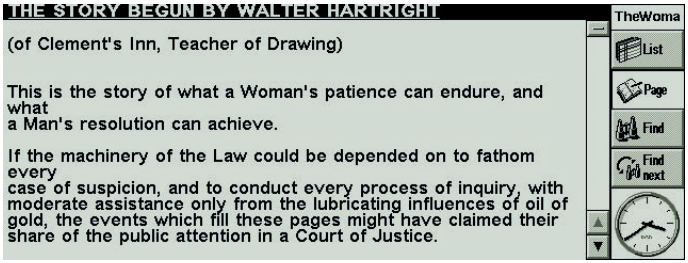
Several cosmetic problems were brought up in our previous article and these have all been duly dealt with. It's faster too, though further speed improvements, especially when zooming the fonts, would still be very welcome. As well as supporting zooming with the command icons, TomeRaider now allows the display font to be either Arial, Times or Courier.

Two annoying problems, one presentational and one functional, still detract from the overall polished feel of the application. Firstly, the text cannot be reformatted, which sometimes leaves orphaned ends of lines hanging around to distract your eye from following the text. Secondly, the only way to scroll a full screen at a time is to use the [Fn]+[PgDn] key combination or to tap in the scrollbar. There's no single keystroke (such as pressing the spacebar) to let you do this while reading. When you get to the end of a chapter, it's then necessary to press the left arrow key or the 'Next' button on the toolbar. These idiosyncrasies are an unnecessary distraction, and I'd dearly love to see a simple and consistent way of moving to the next page and chapter.

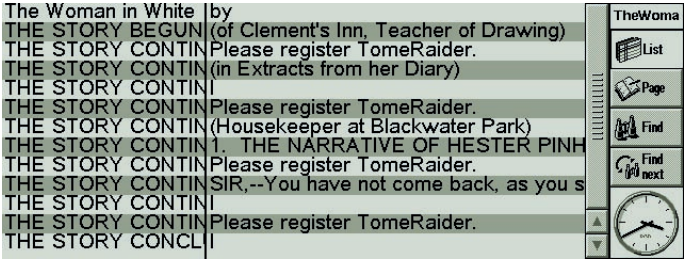
TomeRaider comes into its own when running on a netBook or Series 7 as the larger and clearer screen makes reading so much easier on the eyes, although the bulk of these units makes the job of finding a comfortable reading position more difficult.



TomeRaider running on the Revo



Getting into a good book on the Series 5



The unregistered version prevents you from reading a whole book

Despite its small size and memory, I feel that the Psion Revo offers the best compromise in this context, thanks to the combination of low weight and a good clear screen.

As a shareware application, TomeRaider isn't time-limited, but functionality is reduced until you've registered it, allowing you to view only every other 'page' of a file. Personally, I'd prefer a 30 day trial period with everything working properly, giving the chance to read a few books to see if you're comfortable with the way the program works.

TomeRaider is now even better for reading large reference texts, especially with the addition of hyperlinking. As a way of reading novels, I still feel that it isn't quite 'there'. Other applications do a much better job, and we'll be looking at these in more detail in the next issue, in the start of a new series on electronic books.

The dedicated TomeRaider web site offers links to downloadable files in the special compressed format. The application itself is distributed by the software arm of Palm-Tec, best known for their hard cases for the Series 5 and Revo.

John Woodthorpe

TomeRaider

From: *www.tomeraider.com* and *www.palmtec.com*

Availability: Now

Runs on: All current EPOC models

Price: £15 (shareware)

Quality	★★★½☆
Value	★★★★☆

Merlin

Merlin is a utility that allows you to create application and document-specific toolbars that can contain any number of controls, functions, shortcuts to applications, documents, web sites or macros. There's even a scripting facility to add further automation (more of this later).

There are two versions of Merlin available, one for the netBook/Series 7 and another for the Revo/Series 5 and compatibles. The current version is 1.00, which I tested on a 5mx and a netBook. It's fully-working shareware with a 30 day trial period.

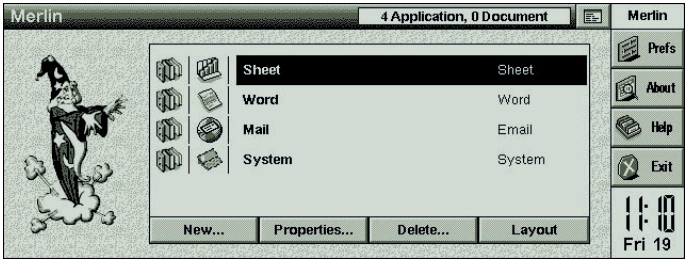
I admit that I initially approached it with some scepticism. There are plenty of application launchers and shortcut managers available already and I questioned whether the EPOC world needs yet another. However, it soon became obvious that Merlin is one of the more elegant and powerful examples of the genre. What really sets it apart is the ability to customise the interface of virtually any application you desire.

Merlin is not the easiest application to get to grips with at first. Setting it up takes some time and is a reflection of the power and complexity of the application. It's worth taking trouble to experiment, and to help you get started, the authors, Neuon, provide a sample toolbar.

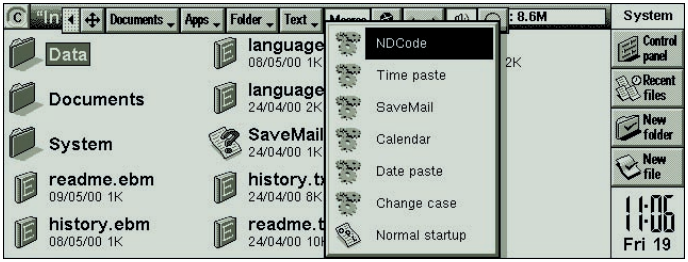
You can define an overall system-wide toolbar that is present in every application or document, or you can create toolbars dedicated to specific applications and documents. In practice I found it preferable to define one toolbar, which could then subsequently be copied and edited to suit other needs. Three or four toolbars was all I needed to cover my own requirements, and a typical toolbar would contain a list of frequently used macros; a list of my favourite documents; a list of predefined text such as my e-mail address, signature and home address for pasting into documents as required; a list of email addresses—quicker than relying on the link to Contacts; plus a list of folders that I need to switch to in a hurry.

You can of course populate toolbars however you wish, but as an example a system toolbar could contain shortcuts to multiple folders, applications and system functions, while an email toolbar could contain email addresses and signatures ready to be pasted into messages, plus any commonly used-macros.

The real beauty of Merlin is that it's limited only by your imagination, and used with care it's quite possible that you'll never again need to wade through the Extras bar, navigate through the System screen or invoke other macro software again. I used



Merlin showing a list of toolbars



Merlin offers shortcuts to macros

it particularly for those functions which previously had no shortcut keys and for all the numerous macros whose shortcuts I can't remember. Neuon do warn that some macros might not work with Merlin, but in testing I came across no problems with the ones that I use regularly.

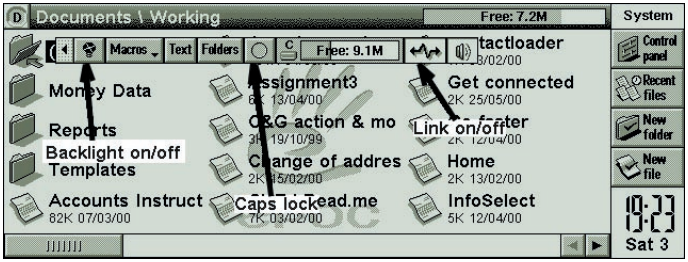
One of the weaker aspects of EPOC is that finding a document on a large CF disk or navigating through layers of folders can be slow and tedious. With Merlin installed, access can be almost instant if you add your favourite documents to a menu bar, because two taps on the screen are all that's needed to open a document from anywhere.

A feature I particularly like is that documents in a menu bar can be clearly identified by their native icon (Word, Sheet, Data, etc.), or by a user-defined alternative. You can add text alongside the icon, have text only, or just the icon, so it's easy to identify what the shortcut points to.

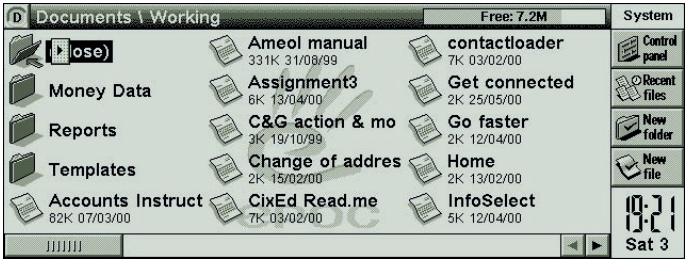
Some of Merlin's extra functions are provided by 'plug-ins'. These are small programs that allow access to functions that are normally available only from the System screen. They come in the form of SIS files, and are currently available for: link on/off, caps on/off, memory info, task list, battery info, and sound on/off. The intention is that developers can produce their own modules to further extend the capability of Merlin, so hopefully we'll see this list gradually expanded.

One of my criticisms of Purple Software's Navigator was that you lost essential access to system functions if you used it as an alternative interface to the System screen. This is no longer an issue if you use Merlin in conjunction with Navigator, and forms a very neat solution.

Merlin is meant to be left running continuously in the background while providing a toolbar for whatever application is in the foreground. I suspected that this might slow



A Merlin toolbar, showing the meaning of some of the less obvious icons



Merlin as a minimised icon

down system performance, but was pleasantly surprised to find that this wasn't the case—no doubt due to the fact that Merlin is written in C++. It *is* memory hungry though, needing 600-800K of system memory to run, depending upon how many toolbars are defined and how they're set up. This may be significant for Revo owners, who could find themselves running out of memory.

Applications that sit 'on top' of others, such as Merlin, can become intrusive by taking up valuable screen space. With Merlin this isn't the case, as it can be minimised or hidden from view by either tapping on it or invoking a shortcut key combination. It can also be moved around at will by dragging with the stylus, though unfortunately it can only be positioned in a horizontal plane. It would be preferable if it could also be aligned vertically with the existing EPOC toolbars.

Merlin includes a scripting function allowing you to automate some functions or mimic certain key presses within applications or documents. In theory this is useful where a function might not have its own shortcut key combination, and thus saves time navigating through menus. In practice it worked fine for simple operations, but I had some trouble when I got more ambitious with tabbed dialogs. Despite inserting pauses to ensure that actions completed properly, the results were variable. Overall I found the process of creating the scripts rather long-winded and eventually gave up. Compared to a purpose-written macro it's clumsy and far from foolproof, but for simple needs it's adequate and has the bonus of requiring no programming knowledge whatsoever.

As with any new applications of Merlin's complexity there are a few rough edges. The battery info module appears to disable the system's auto-off function unless the refresh frequency is optimised (in excess of 30 seconds seems to work most of the time), and Web on my netBook wouldn't launch at

Editing a toolbar to suit your own personal requirements

all with Merlin running. I also found that if a toolbar was edited then Merlin sometimes failed to reinitialise and bring the toolbar to the foreground again, often making it necessary to close Merlin and then relaunch.

Despite these teething troubles, Merlin is a powerful and flexible new tool for EPOC users. It becomes even more powerful if used alongside the freeware Macro5, which adds sophisticated macro functionality.

It's stable, it didn't crash, and at £15 represents good value for money to the extent that I registered it after just a few hours use. It's now a permanent feature on both my Psions, which should be recommendation enough to at least give it a try.

Nigel Wright

Merlin

From: *www.neuon.com*

Availability: Now

Runs on: All current EPOC models

Price: £15 (shareware)

Quality	★★★★☆
Value	★★★★☆

Psion ART

Created by Carl Reader using Series 5 Sketch

The Quartz crystal ball

Steve Litchfield peers into the future of EPOC in the first of a special series

Ever since Symbian's birth (covered in issue 19), Psion's alliance with a variety of (primarily) mobile phone companies has created both expectations and misconceptions. Now that both Symbian and their licensees have started demonstrating their ideas to the world, this seems a good moment to take another look at the mobile hardware that many of us will be using in the next year or so.

The three flavours of Symbian

Firstly, to clear up any confusion, units such as the Revo and Series 5mx are *not* being phased out to be replaced by mobile phones, however 'smart' the latter may be. One of the first things Symbian did was define a series of 'reference' designs (Crystal, Quartz, and now Pearl), each capable of being used as a base for companies building derivative products. We can discount the 'Pearl' standard for now, as it is designed solely for mobile phones, has yet to emerge in tangible form and will almost certainly be restricted in terms of third party software choice.

'Crystal' is the closest to what most of us have been using up until now, being based around a landscape format display with a width of at least 640 pixels and probably using the EIKON (Series 5-style) user interface. Although little seems to be happening on the surface, Symbian has been working non-stop for at least a year on EPOC Release 6 (ER6) software for Crystal, so there's a lot going on behind the scenes. At the time of writing, there's no hard information on the physical form in which Crystal will be implemented by Psion and the other EPOC licensees—my best guess would be as palmtops with similar form factor to the Series 5 (the Series 9?) perhaps with colour screens, rechargeable batteries and integrated communications similar to those mentioned below. That's only a guess though, and they're likely to arrive any time between Autumn this year and the end of 2001.

More than a palmtop

All of this leaves 'Quartz', for which there's rather more information available. Think of it as a Palm/Pilot-style organiser souped up to the 'nth' degree and potentially taking advantage of all the new technology now available. Quartz is referred to as a 'communicator', being a handy combination of mobile phone and pocket computer.

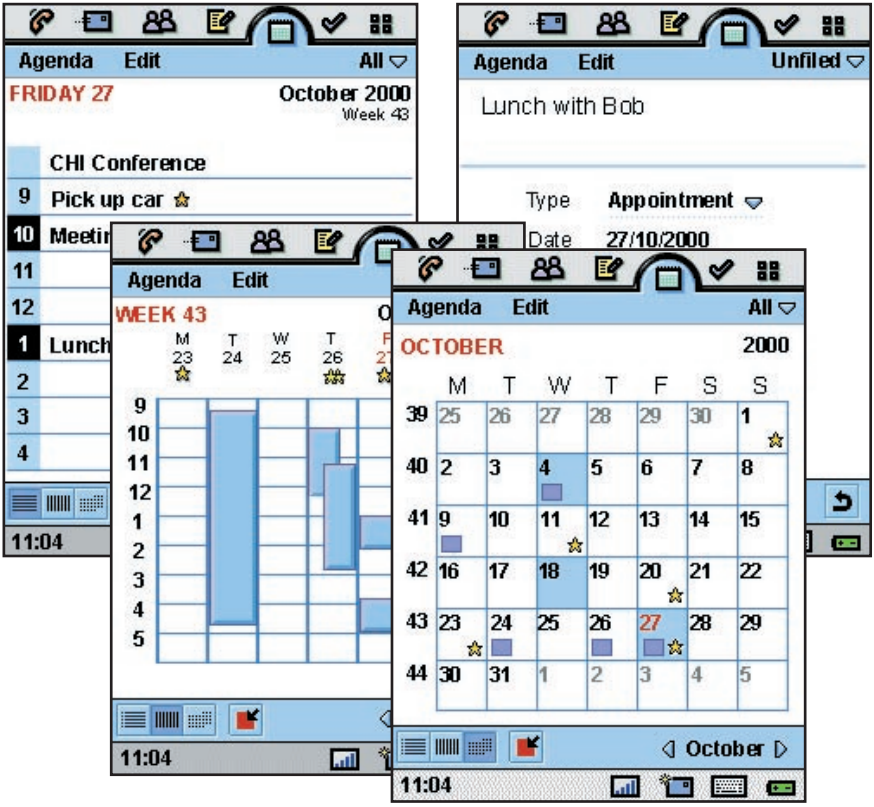
It's important to distinguish between the basic reference design (essentially the operating system and software provided by Symbian) and the specification that appears in a real-world product. For example, the Quartz design refers to a colour, touch-sensitive screen (240 by 320 pixels) with voice capabilities, using either a Bluetooth wireless headset or an earpiece attached with a wire, and next generation GSM mobile communications capability. On top of this, the manufacturer will customise and add to the basic ER6 software and can include extra hardware modules, such as a built-in GPS (Global Positioning System) receiver, able to locate the unit's position anywhere in the world with an accuracy of better than 10 metres. This would turn the device into a powerful navigation tool as well as a portable computer and telephone/Internet device.

'Everywhere' computing

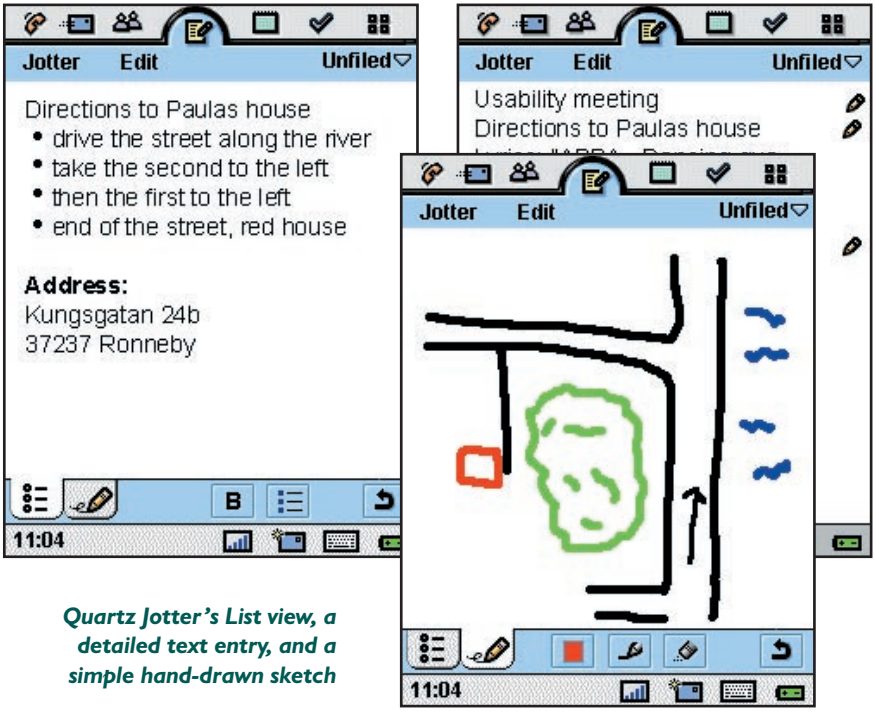
Communications really is key to understanding Quartz. There will be no wires to worry about (unless you prefer to use a conventional earpiece for taking voice calls) and for many Quartz implementations you'll never need to dial in to the Internet because you'll always be 'on' it. Emails will be sent the instant you tap on 'Send', looking up a web site won't be something you put off until the phone rates are cheaper, and channel information from news and financial sites can be streamed into your Quartz device in real time.

The future of the GSM mobile telephone system is bedevilled by confusing acronyms (HSCSD, EDGE, GPRS and CDMA to name but four), but the eventual aim is fast, 'always on' operation, anywhere in the world. In this regard your handheld communicator and you are soon going to be more Internet-aware than most current desktop systems.

WAP will also play a significant part in keeping Internet content speedy under the Quartz design, especially as more and more



Quartz Agenda's Palm/Pilot-esque Day, Detail, Week and Month views



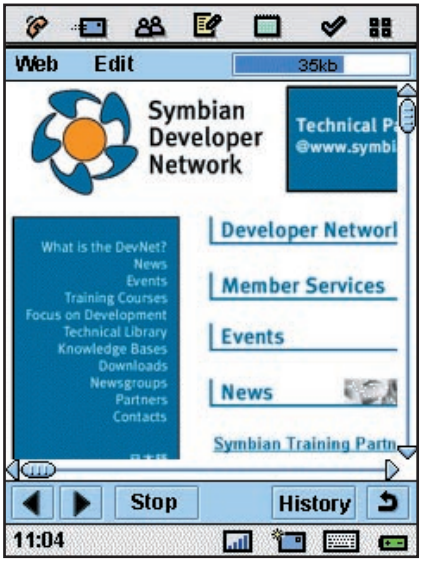
Quartz Jotter's List view, a detailed text entry, and a simple hand-drawn sketch

conventional web sites become ever more reliant on such bandwidth-hogging technologies as Flash, Shockwave, Javascript, Java, ASP (Active Server Pages), etc.

A new face

Much of the standard Quartz software will be familiar to you, at least in terms of its function. Those who've seen or used Palm OS organisers or Windows Pocket PC units will also recognise both the names and the look and feel of the 'big four' PIM applications: Agenda, Contacts, To-Do list and Jotter. Even a cursory glance at the screenshots in these pages should tell you that Quartz doesn't use EPOC's existing EIKON interface—the new graphical user interface is completely rewritten around a colourful tabbed theme. Each of the principal applications has its own tab at the top of every screen and multiple internal tabs at the bottom, whenever appropriate. In similar fashion to Palm OS, there are no obvious files and folders, with each application dividing content into categories, selected from a drop down list at the top right of the screen. Although this all sounds restrictive, it works very well (just as on the Palm) and with a little lateral thinking isn't a million miles away in concept from the 'washing line' System screen arrangement of the Psion Series 3.

Things to do, people to see



Colour web browsing on the go

Keeping it simple

Those familiar with current versions of EPOC will also note the absence of embeddable objects and font and display flexibility. In truth, these just aren't needed in a dedicated organiser/communicator, as witnessed by the phenomenal success of the minimalist interface of the Palm handhelds. Both Quartz's small screen size and the focus on selling these units into ever-widening consumer circles has meant yet another step towards simplicity within the supplied EPOC applications. Those who mourned certain omissions in the Series 5 will doubtless cry foul again, but they'd be missing the point. Quartz is about making Personal Information Management and communication as easy as possible for the average person in the street. The Psion Series 3 range shipped with large technical and programming manuals—I'd be surprised if a typical Quartz device manual numbered more than 50 pages, if it has one at all. Besides, for those wanting more power and a mechanical keyboard, there are always the Crystal-designed successors to the Series 5mx and Revo range waiting in the wings.

EPOC inside

EPOC's advanced 32-bit multi-tasking and communications capabilities are of course two of the reasons why many cellphone companies signed up with Symbian in the first place. With Internet protocols and email functions now built into EPOC, it's not surprising to see a Messaging application as part of the Quartz design, with email, SMS and fax capabilities. Also carried forward from technology in ER5 are a sound file recorder and player plus a viewer for Microsoft Word email attachments.

TomTom?

Recipe for TomTom cake

- Take Palmtop Software's route and street planning technology and host it on a WAP or web server.
- Add in downloadable black and white or colour mapping with places of interest (restaurants, cinemas, petrol stations, etc.) and personal favourite locations.
- Drop in a pinch of smart address searching and postcode positioning.
- Stir in some live, local traffic information.
- Mix well using the Global Positioning System (or phone network-based positioning).
- Bake and roll out into whichever shape you prefer. If it's Quartz-shaped then so much the better.

Ambitious integration

It's difficult not to be impressed by the ambitious nature of TomTom. To mix these 'live' information sources into a coherent whole, whichever country you're in, and then make it work on anything from a WAP smartphone to an Ericsson MC218 and from a Palm organiser to a Quartz communicator is impressive.

Palmtop Software have sensibly made large chunks of the TomTom system as 'open' as possible, so at least they don't have to take on the burden of getting it all working entirely on their own. TomTom is sold to GSM network operators, ISPs or other mobile service providers, who then offer an integrated set of location-based services for both WAP or web-enabled devices.

The main menu shown using TomTom today, on a WAP phone

TomTom running on a WAP phone once again, showing traffic information

An early preview of Street Planner technology running under Quartz

TomTom can be highly personalised, via each user's private TomTom web page. So for example, you could tell the system "I like Mexican food and minimal three star hotels", following which these would be prioritised for you. It also runs in many languages: English, German, French, Spanish, Italian, Dutch, Swedish and Danish.

At the moment, the system's only available in the Netherlands, but talks are in hand with mobile phone companies in the UK and elsewhere, with rollouts happening over the next six months. The basic TomTom WAP interface will work with any smartphone, such as the Ericsson R320/R380, the Mitsubishi Trium, the Motorola TimePort P7389, the Nokia 7110/6210/6250 or the Siemens S35/C35i. With the promise of an official WAP browser coming soon from Psion, the Series 5mx and Revo will then also be able to take part. Functionality is also possible over a web interface, should the mobile provider or ISP choose to do it this way.

The next step

It's with Quartz and similar communicators from other manufacturers that TomTom will come into its own. Rather then being restricted to a WAP or web interface, a dedicated TomTom client will be installed on your PDA, giving a much faster and richer interface while still accessing the necessary extra maps, traffic and location data wirelessly, probably over a high speed GPRS link.

The basics of the much-acclaimed Street Planner (reviewed in issue 27) have already been ported to Quartz to use as a starting point and the rest of this year should see Palmtop Software integrating it with the online part of the service. As with the Route Planner and Street Planner products, map coverage will initially be for Great Britain and most of Europe, plus the USA and Canada, although other sources of mapping data can be plugged in at a later stage. Finally, with one eye perhaps on a rosy future, there's also provision in TomTom for other wireless services to make use of its routing and mapping capabilities.

A born killer

We've mentioned in the past that Route Planner and Street Planner are perhaps 'killer' applications for the handheld platform. With the addition of 'always on' wireless information to work out where you are, how to get where you want to go and what sort of traffic you'll meet on the way, the term 'killer' has never been more apt.

Contacts, in list view...

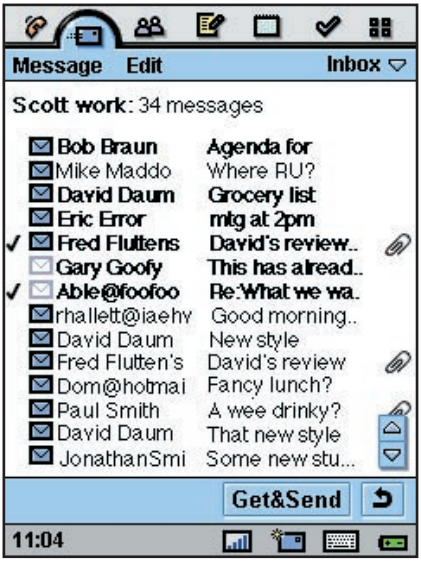
...and details view, including hyperlinks

It's currently expected that both WAP and standard web browsers will be included in most Quartz devices. Yes, it's confusing having to worry about whether a particular site is best accessed via one browser or the other, but that's the modern Internet world, and at least EPOC will give you the choice. The current Quartz web browser is based on the same (STNC-written) code used in ER5's built-in Web application, but an in-house Symbian browser is currently under development.

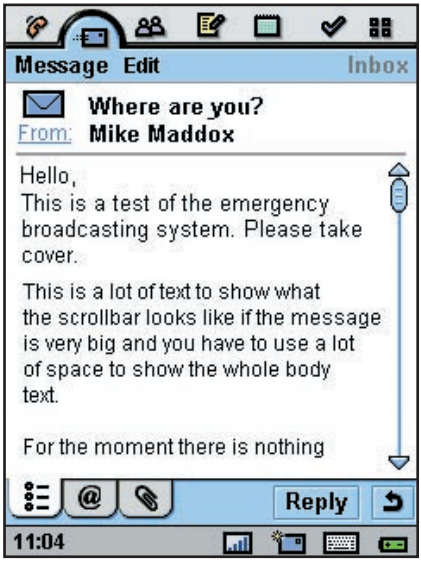
Extensibility and flexibility

A consistent feature of the Quartz interface is (in similar fashion to the Windows CE and Pocket PC handhelds) a status bar at the bottom of the screen. By default, Symbian provide just a clock and virtual 'pop-up' keyboard, but licensees are bound to add status icons of their own, perhaps representing memory usage, new mail waiting or battery status. Although Symbian don't provide a handwriting recognition system as standard with Quartz, they've put all the 'hooks' in place for licensees to be able to plug in CIC's popular 'Jot' gesture system (again, as used in many Pocket PC units). Licensees would of course be free to add in any other system of their choice and rumour has it that at least one has chosen to use Palm OS's Graffiti recognition system. Whichever gestures or script is chosen, you'll be free to write anywhere on screen, with your pen strokes echoed briefly and then interpreted.

All Quartz-derived handhelds will of course have infrared ports—it has become second nature now to expect organisers of all origins to be able to beam contact details to each other, together with appointments and text snippets. Support for the emerging

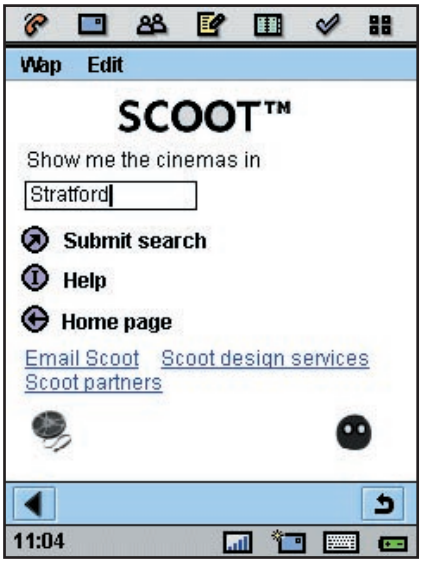


A typical email messaging Inbox...



...and reading an email message

Bookmarks in the Quartz WAP browser



Accessing Scoot, a popular WAP service

Bluetooth radio standard is also built into the Quartz design, even eliminating the need for line-of-sight when connecting to printers and other accessories.

Tappability

In daily life, the marriage of pocketable organiser and 'always on' Internet power will mean a huge leap in convenience. For example, after bringing up a contact's details on screen, you'll be able to tap on the phone number to dial them directly, speaking to them using the built-in microphone and plug-in headphone (or Bluetooth headset). Or you can tap on their email address to compose and send an email message, tap on their web address to visit their web site, and so on, for SMS, fax, etc.

One of the biggest selling points for palmtops and handhelds has always been their software expandability, and Quartz again follows the Palm OS line by presenting applications within categorised 'pages' such as 'Main', 'Games', etc. Installation itself will presumably still use the SIS mechanism from ER5, being quick and foolproof. Palmtop Software were first off the mark for Quartz, at CeBIT 2000, by showing off TomTom, their mapping and navigation assistant (see the boxout on pages 36-37).

With each Quartz licensee adding their own software and hardware over the next year, we're likely to see a whole range of software-compatible organisers, each with their own unique selling points.

Getting along with ExtraBars

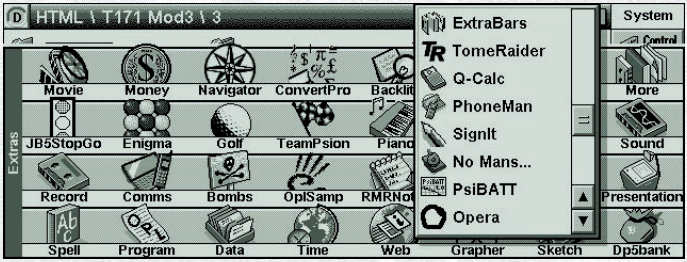
John Woodthorpe explains how this improved integration utility is a perfect match for the Series 5mx

Regular readers will already have guessed that I'm a sucker for applications that tie together many of the different aspects of my palmtop, acting as a control centre. In recent issues of *Palmtop*, we've reviewed Notepad Deluxe, Macro5, HotKeys and Mentor, to name but a few. Plus, of course, ExtraBars itself. This is the point where I own up to having stopped using it on my Series 5 because it was just too slow for me. Having upgraded to a Series 5mx, I've tried again and found that ExtraBars really benefits from the greater speed of the newer EPOC palmtops. It's moved on from the version 1·0 reviewed in issue 20 to version 1·20F now and has settled down as a mature application.

What does it do?

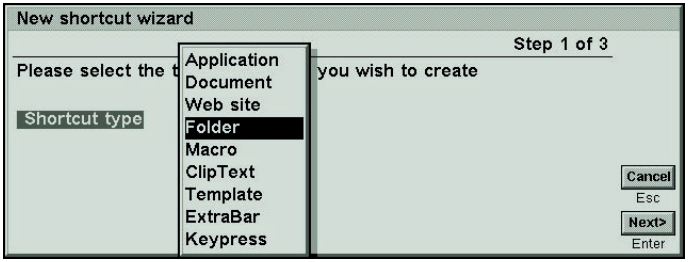
Put simply, ExtraBars provides you with more pop-up Extras bars. However, unlike the built-in system of four bars and then a 'More' entry that reveals a huge overflow list of applications, ExtraBars is highly configurable.

The entries on an ExtraBar are the ones you decide *should* be there, not the ones chosen by EPOC. This sort of flexibility runs through the whole program, allowing you to have bars for specific purposes so you can collect together all the files relating to a particular job. I say 'files', because that's one of the first differences you notice from the built-in facility. The contents of ExtraBars aren't limited to applications: they can be documents, folders, keypresses, and so on.



The standard Extras Bar with over 40 applications installed

What would you like to put on your ExtraBars?



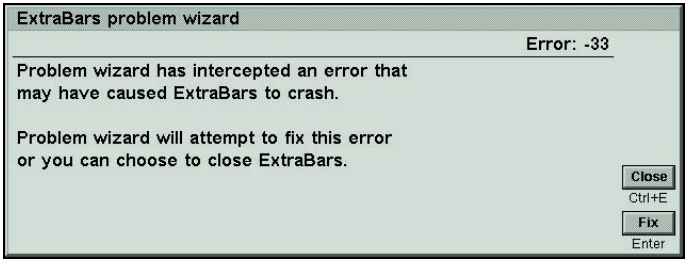
They can even be used to call up further ExtraBars.

How does it perform?

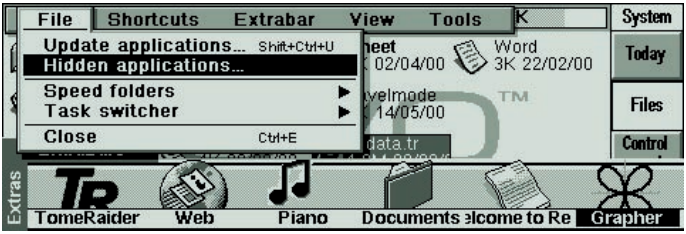
ExtraBars has to be one of the most comforting and robust applications I've used on a Psion. For example, I'm very 'good' at doing things that application authors don't expect, and this sometimes results in an ungainly crash with both a cryptic error box on the screen and lost data. ExtraBars displays a remarkable ability to detect an incipient crash, warn you about it and then try to recover. Although crashes happen very rarely in my experience, when they *do* the recovery process has worked for me every time. I've never before come across an application that effectively tells the user "I'm about to crash, but if you press this button I'll try to sort myself out first". How many other applications can boast such a tolerant and resilient nature?

The online product support page for ExtraBars details some of the known problems and workarounds. In the unlikely event that you have a problem, that's the place to go for answers.

ExtraBars works on both the Series 5 and Series 5mx, and, apart from the oddly large icons, also on the Revo. It can be used on the Series 7 and netBook too, but for some reason the option to capture the 'real' Extras button doesn't work, and of course the ExtraBars bars are still horizontal while the main Extras bars are now formatted vertically. Apart from this oddity, it seems to run quite happily on the larger machines. Indeed, with the option to use larger storage media such as the IBM Microdrive (reviewed in issue 28) on these devices, you could argue that the value of such an application is even greater than on the smaller palmtops.



"We have a problem, but I think I can fix it if you want me to" says the Wizard



ExtraBars on the Revo

What limitations are there?

There are still some minor niggles that emerge when you start to delve further. For example, I keep collections of web pages on a CompactFlash card so I can access them without connecting to the Internet. They are all in the same main folder, but some are individual pages and others are whole sections of web sites, so navigating to them isn't always easy. The obvious solution is to bookmark them in Web or Opera (also reviewed in issue 28), but I thought I'd try to set up ExtraBars to launch them. Although you can add a document to an ExtraBar, there are some restrictions. Quite sensibly, it won't let you add a document that can't be launched by double tapping on it from the System screen. However, it seems stuck in 'Series 5 Classic' mode and claims that HTML files can't be launched in that way.

An alternative is to add the pages as local web sites, which is a little tedious as you can't simply navigate to the file from the setup dialog. Instead you either have to type the full pathname manually or launch the file in Web, copy the quoted filename and then paste it into the ExtraBars configuration. I commented on this in the original review, and it has been improved a little—now if you now mess it up when first entering the pathname you can edit it to correct your mistake.

What's changed since our last review?

One of the main new features of ExtraBars is the ability to reconfigure key presses to whatever you want. If you don't like an application's built-in shortcuts (e.g. to go to the To-Do view in Agenda) then you can redefine them to something *you* find more intuitive. When you press the new key combination it intercepts it and sends the original one to the application that's currently running in the foreground. This gives you a way of adjusting some of those annoying applications that don't conform to the standard Psion/EPOC style guide and which use strange shortcuts for common actions, such as closing down.

One of the most useful new features is the ability to use so-called 'ClipTexts'. These are frequently-used passages of text that you assign to a shortcut and can then paste into the foreground application at any time. You might think this would be limited to a short email signature or text phrase, but I've got over 2,000 characters in one of these and there's still room to spare. The only restriction is that they cannot include formatted text (with font effects such as Bold, Italics, etc.). This is a pity, but the power of this feature to let you paste in substantial standard passages drawn from a vast library is the sort of hidden gem that could justify the registration fee by itself.

Setting up a ClipText

Another new feature is the ability to define templates. Simply create a master document that has all the elements you want, add it to an ExtraBar as a template and you have a collection ready for customising. As with many of these features, you could achieve a similar effect by setting up a range of files and folders, making them read-only and using them to create your standard documents, and of course the newer EPOC machines have a template library anyway. But the ExtraBars solution is neater and has the double merit of both preventing you from overwriting your template and of working on the older Series 5 'Classic'.

You could also claim that a lot of these things (and more) could be done with macros, but it's far easier to set up ExtraBars to perform one of its standard functions than it is to write a macro to do the same thing. And anyway, if you already have some favourite macros you can simply add them to an ExtraBar and run them from there! In fact it comes with a selection of Macro5 macros as well as some of its own in EScript format, so ExtraBars gives the best of both worlds.

Old but good

All of the original ExtraBars features are still there, of course: genuinely helpful configuration Wizards aid in setting up, it still controls the backlight to switch on and off whenever you wish, lets you run various programs at start-up, can set up multiple bookmarks to regularly used folders via a 'SpeedFolder' system and much more. Having neglected it for a few months, I'm amazed at how much more useful it has now become. ExtraBars puts the built-in Extras bar in the shade.

ExtraBars is available from www.epocplus.com as shareware. Until registered, it is fully functioning and not time-limited, but restricted to five bars with forty entries each. Registration costs £15 and increases this limit to one hundred bars.

Become an EPOC webmaster!

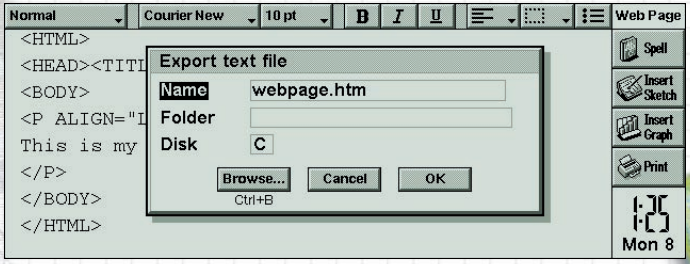
Dave Morgan explains how to create and maintain a web site using nothing more than your EPOC palmtop!

Although most commercial web site developers use desktop computers, sites can also be built and maintained using nothing more than an EPOC palmtop.

Using your palmtop to maintain a web site isn't restricted to personal web pages though. Although EPOC doesn't have the graphical credentials to build a corporate web site from scratch, it can still be used for updates. This could include adding press releases or updating product information.

Anatomy of a web site

There aren't any WYSIWYG web tools available yet for EPOC, so you'll need to know a bit about how a web site is constructed and something of HTML before you can get started. HTML is the language used to build web sites and is quite easy to learn. Every bookshop will have at least one good beginner's book on HTML, and armed with such a book you can learn the basics within an hour or so.



Using Word to edit the text of an HTML file

At its simplest, a web site consists of a single HTML file, containing the text of a single web page plus information needed to format it correctly. If the page links to others then the HTML file will also contain their addresses (known as URLs—Uniform Resource Locators), and if there are images to display within the web page it will contain their filenames. Note that your 'home' page must have a specific filename in order to work, usually INDEX.HTML. Check with your ISP for the correct name to use.

An HTML file is just a plain text file with a '.htm' or '.html' extension and can be created using Word. Once you have typed in your HTML code, use 'File | More | Export as text file' and save it as an HTML file by changing the default '.txt' extension to '.htm'.

Using Word to generate HTML files requires a lot of care, because Word offers no special features to help you with the syntax of the various tags (the text labels which describe formatting, images and so forth), unlike PC-based HTML editors.

A better way

Even if you are an expert, you'll still find it easier to use **HTML Designer**, a dedicated HTML editor for EPOC which contains a library of HTML tags. This is more than just a reference database, as it also prompts you within the editing environment where tags require additional information. As an example, if you want to define a new text paragraph then HTML Designer will ask you how you want the text within that paragraph aligned. Once you have completed the dialog box, HTML Designer will add the appropriate tags, complete with any additional information required.

HTML Designer allows you to choose between either starting from scratch or using a predefined template. Starting from scratch is painless as there's a 'New page wizard' feature which prompts you for all the information necessary to create a basic HTML 'skeleton'.

If you want to start with a template you'll need to create your own, as HTML Designer is not supplied with any. The template option makes creating large web sites easier because you can create one to define the overall feel of the site (with headers, sidebars, footers, table layouts, etc.) and then fill that template with the specific content for each of your pages.

Converter

Although HTML Designer helps you with the code, you still need to know a reason-

An easier way—using HTML Designer to edit an HTML file

HTML Designer, offering help for the simple paragraph tag

able amount about the HTML language in order to use it effectively. If you are new to web site construction or just want to throw up a quick web page without the hassle of messing around with markup language, **HTML Converter** might be a better option for you.

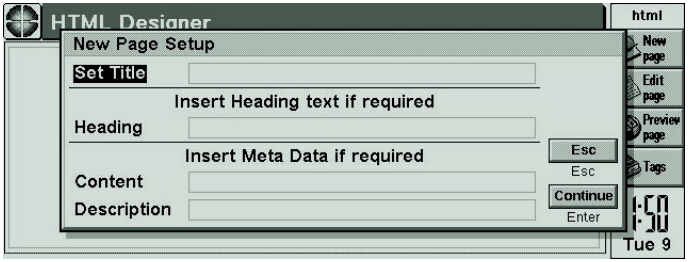
This differs from using Word or HTML Designer in that you don't need to know any HTML in order to use it. First you prepare the required text for your page and then you save it as a plain text file. HTML Converter then processes this text file to generate your web page. Text is processed according to how you have set it out. The first line of the file is the title that will appear at the top of your web page. The next is a heading (unless you specified an image to go at the top) and the remaining text will appear in the body of the page.

You can alter whether a paragraph appears in bold or as a heading by leaving blank lines before it. One blank line means that it will be in bold, two lines means it will be structured as a heading, three lines means it will be a larger heading, and so on.

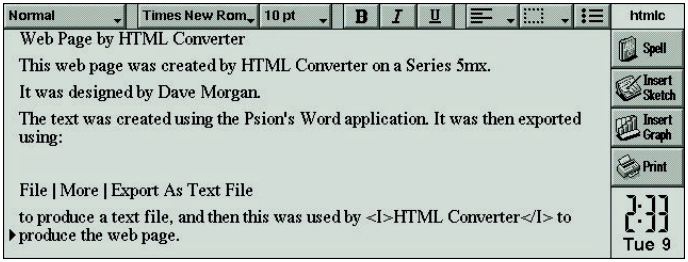
HTML Converter is ideal for producing simple web pages, but because it uses a standard template all pages inevitably look rather similar. It is also only capable of building one web page at a time and so it can't link between different web pages within your site. Having said that, any HTML tags you have embedded in the text file are preserved during the conversion process, and so if you know a little bit of HTML code you can influence the resulting file that is generated. For example, you can italicise words using the <I> tag.

Text easy, graphics hard

Producing the HTML file is the easy part. Generating graphical content for your web site is a little harder. EPOC's built-in Sketch is often inadequate and third party applica-



HTML Designer's 'New page wizard'



HTML Converter—some example text file source

tions, although better, still don't make the grade.

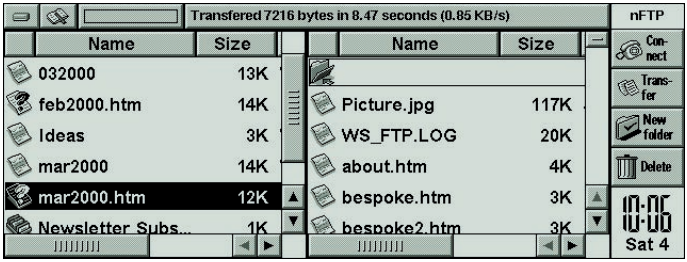
One scenario where using your Psion to generate images for a web site would be particularly useful would be if you were a shareware author. You can generate screen shots of your product using [Ctrl]+[Fn]+[Shift]+[S], although you would then need to use an application such as **MBMView** (reviewed in issue 28) to convert them from 'EPOC picture' files to either of the Web's native JPG or GIF formats. Simple logos and button graphics could be produced in Sketch, although you'd need to be using a Series 7 or netBook to make any meaningful use of colour.

You could also use a digital camera to produce your images. Conventional photographs lose most of their quality when they are scanned for use on a web site anyway, so the fact that many digital cameras produce fairly low resolution images is largely irrelevant. Combine the portability of a digital camera with that of an EPOC palmtop and the opportunities are enormous.

You can now take a picture, beam it to your Psion over infrared (or transfer it via CompactFlash disk), build a web site using HTML Designer or HTML Converter and have it published to the web in less than half an hour. As a 'new media' journalist, this means I can publish an article on the Internet while waiting for the plane back home.

If you don't have a digital camera, you will need to rely mainly on clip art. If you search for "clip art" in any of the major Internet search engines, you'll be presented with a large number of libraries to choose from. Some of these specialise in specific types of clip art (e.g. transport or borders) but most just offer a selection of images, usually in GIF format, which can be viewed in MBMView or Web and then referred to in your HTML page.

HTML Converter—the resultant page in Web



Neuon's nFTP in action

Copyright issues

Most clip art libraries waive copyright on their images for use in non-commercial web sites, perhaps making a small charge for use in commercial ventures. Some require you to publish an acknowledgment on your site if you do use their clip art, so be sure to read any terms or conditions.

If you are tempted to use an image from a web site without the permission of the owner, *don't*. Just because a lot of information is 'free' on the Internet doesn't mean that you can simply copy it and reproduce it in your own web site. Copyright still applies to material published in this way.

The same applies to linking to other people's sites—don't just link to them without the owner's permission. Most web site owners will be more than happy to let you link away because it generates extra traffic for them, but some will object, especially if your link makes it look like the other web site is associated with yours. If in doubt, ask.

What about HTMLEdit?

Started by Russ Spooner and later taken over for a while by Steve Litchfield, this project was dropped completely in 1998 because of technical difficulties. Many of its ideas (and some of its code) have found their way (with permission) into HTML Designer, mentioned above.

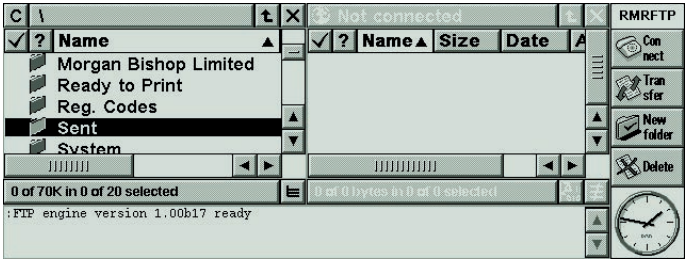
Preview time

Once you have built your web site you'll need to check it before publishing on the World Wide Web. Whether you have used Word, HTML Designer or HTML Converter to construct it, the best way to check it out is in a real web browser, so if you haven't done so already, you will need to install the Web (or **Opera**, see issue 28) application on your palmtop.

HTML Designer and HTML Converter both help you to check your pages in Web via a 'Preview' command. Because Word was not designed as an HTML editor, it doesn't have this option and you'd have to open the web pages manually in Web. If all has gone according to plan, your web site should appear on screen in all its glory. If you have built a site containing a number of pages, it is vital to check that all the links between the pages work correctly.

Publishing

Once you're happy with your work it's time to publish it on the Internet. You will need somewhere online to store your web site: if you have an account with



About to connect with RMRFTP

an Internet Service Provider you almost certainly already have a few megabytes of free web space allocated to you. To 'upload' your site into this space you will need an FTP program, the lack of which had meant that until recently this article just wouldn't have been possible. There are currently two FTP clients available for EPOC. There is little to choose between Neuon's **nFTP** and RMR Software's **RMRFTP** and either are worth a try. nFTP provides a slightly cleaner interface but RMRFTP has more features for the advanced user.

Start by telling the FTP client where your web space is located—if you're not sure of the exact FTP address, consult your ISP's Technical Support pages. The program will then connect to the FTP 'server'. If you are using an original Series 5 'Classic' you will need to install Message Suite (Email and Web) as both FTP clients use parts of this application to make their connection to and through the Internet.

Once connected, just select your site's files from the folder listing on the left hand side of the screen and transfer them to your web space by tapping the 'Transfer' icon. As soon as you have transferred all of the files that make up your web site, it has then been published to the Internet. If you're not sure what address users have to type in to view your site, ask your ISP. Many personal pages are of the form *www.myisp.com/~myname* .

As a further help, there are thousands of tutorials and resources on the Internet itself covering all aspects of web site construction, from HTML itself to improving the structure and design of your web site. With a little practice you should be able to do everything via your palmtop—an impressive feat to the average computer user.

Availability

HTML Designer - shareware, £15 - *www.pocketiq.com*

HTML Converter - shareware, £15 - *www.pocketiq.com*

MBMView - shareware, $25 - *ourworld.compuserve.com/homepages/platodva/psion.htm*

nFTP - shareware, £12 - *www.neuon.com*

RMRFTP - shareware, £15 - *www.rmrsoft.com*

Maximising the revo

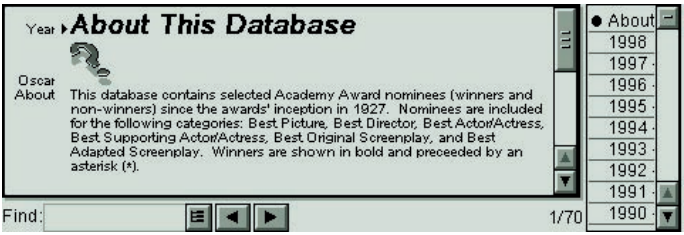
Trying to squeeze the most out of Psion's smallest palmtop computer? Here's all you need to know...

by Steve Litchfield

Since our initial review of the Revo in issue 26, we've heard nothing to suggest that Psion have done anything to address the noted omissions in their smallest palmtop. Especially omissions as seen from the perspective of someone downsizing from a Series 5mx. Hardware features such as the missing backlight or the limited 8MB of main memory are of course impossible to work around, but there are a number of software approaches that come close to bridging the gap between the Revo and the physically larger palmtops. Here's a roundup of what's currently available.

Sketch

This is the big one. At first sight, you might be forgiven for thinking that the lack of a built-in Sketch application is no great loss. After all, who wants to draw on the tiny Revo screen with the equally tiny plastic stylus? But Sketch plays a vital role in the way EPOC's applications hang together, as an object inside other documents. For example, what about Word and Data files beamed to you by colleagues with Series 5mx's or 7's? Any Sketch objects (logos, photos, line-art, signatures, etc.) in the originals will be replaced by a small '?' icon. Reference documents downloaded

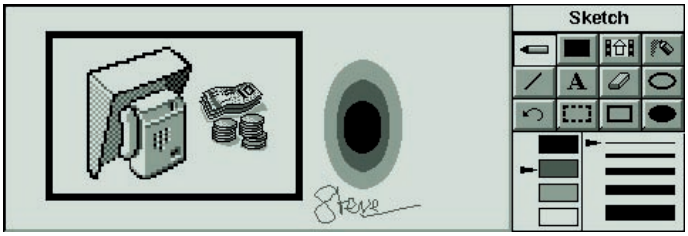


EPOC Sketch—conspicuous by its absence

from the Internet (e.g. from PocketInfo) will also be full of '?' icons wherever Sketch objects should be.

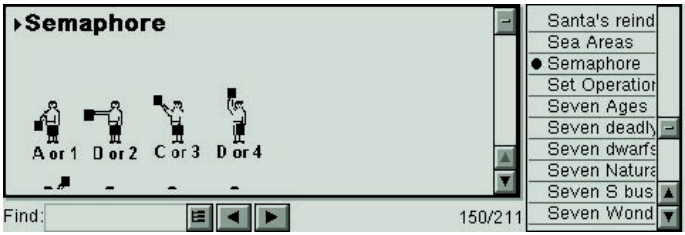
The obvious answer would have been for Psion to post on their web site a version of Sketch which can run from the internal 'C' drive. Despite several pointed suggestions to this effect just after the Revo's launch, nothing official has happened on this front, at least not yet. Fear not though, as Paragon Software have ported the original Series 5 Sketch source code to the Revo, using the right application identifier (UID) so that Sketch objects are handled correctly. Aside from the reformatted toolbar this is virtually identical in operation to the larger-screened original, right down to the selection of clip art on offer.

Also working, though through a less obviously legal route, is the official Symbian Sketch for the netBook. A brave soul on the Internet tried installing the 'Sketch.SIS' file from the Psion netBook CD and was dumbfounded to discover that it not only worked but appeared to have been already programmed to handle the Revo's idiosyncrasies perfectly. It seems the official omission of Sketch by Psion was purely a marketing decision and not a technical limitation of any kind.

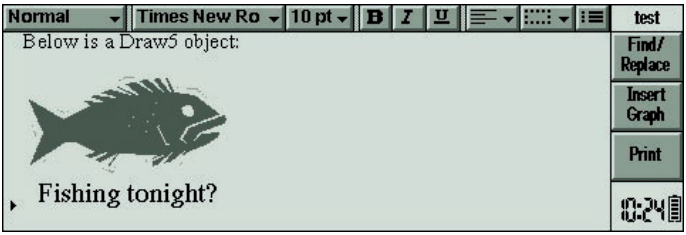


Sketch scaled down for the Revo by Paragon

With Paragon's Sketch installed, reference databases come alive



RMRArt on the Revo, with just a few small anomalies



Using Draw5 to embed graphics in EPOC applications

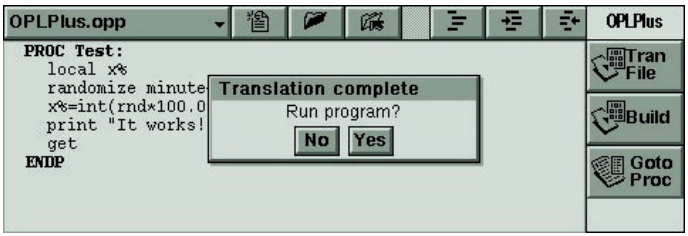
There are of course other ways of drawing on your Revo's screen. Both **RMRArt** (featured in issue 28) and **Draw5** (reviewed in issue 22) work, with a few limitations, the latter even functioning as an EPOC object and being useful for inserting into Revo Agenda, Word or Data documents. **MBMView** (reviewed in issue 28) will also be useful, especially for viewing desktop BMP and JPG photographs on the small screen.

Comms

Although EPOC Comms has always (quite rightly) been considered suitable only for those of a very technical nature, it can prove extremely useful in the right hands for troubleshooting other computers and electronic equipment. This might be as simple as checking the output from a GPS or as complex as dialling into a corporate mainframe system. Not surprisingly, Psion left this application out when designing the Revo, but the shareware program **Hermes** (again with a few display limitations) fills the gap very nicely, with the added benefit of being able to 'Telnet' into company computers over the Internet. When required, physically connecting the Revo to another device of course has to be done through the docking cradle's 9-pin connector (and often a suitable null-modem adaptor).

Fax

The omission of fax functionality from the Revo Email client was a strange move, given the Revo's target market of young professionals. Undeterred, enterprising souls on the Internet discovered that the ageing freeware **EasyFax** (the fax-only precursor to Message Suite) actually works quite well with the Revo, although unfortunately not when using a modem via the infrared port. Whether it's practical to wire up a fax modem via the docking cradle depends on how urgently you need to send or receive a fax.



Advanced OPL programming, using OPLPlus

OPL

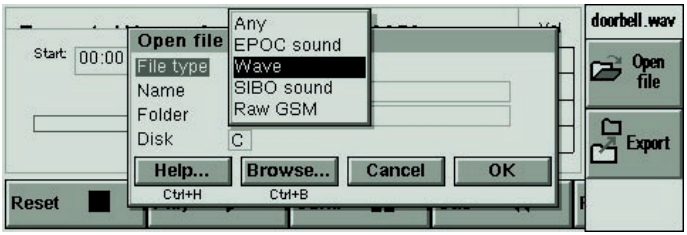
Another very technical application, Psion (perhaps rightly) assumed that the vast majority of Revo purchasers would run a mile when faced with an organiser that proclaimed itself to have a built-in programming language. Although they omitted the OPL program editor from the built-in ROM, all the other components necessary to make OPL work are in place. By copying over a specially compiled version of the editor it's possible to restore full programming functions to the Revo. For full details, see our Hints & Tips section in issue 27, page 102.

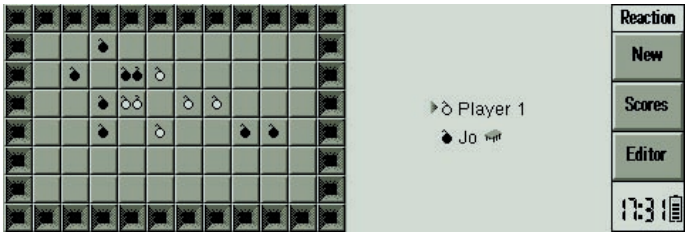
In fact, many advanced OPL programmers tend to use **OPLPlus** in preference to the usual Psion editor environment as it adds a number of advanced features, including a C-like code preprocessor and support for multi-dimensional arrays and structures. OPLPlus works fine on the Revo, even if it is a touch unlikely that such an advanced programming suite would be used on so small a palmtop.

Record

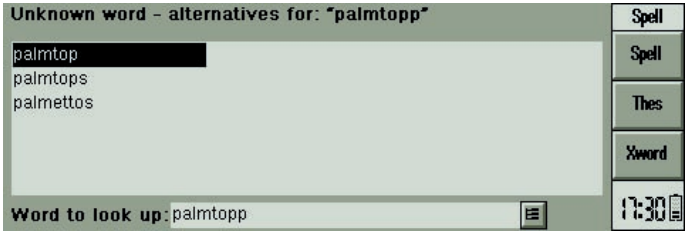
Another understandable omission from Psion, as the Revo has neither the external dictaphone buttons nor the microphone of the Series 5mx. But anyone who enjoys

Dealing with sound in many formats in SoundTrans





Chain Reaction makes a good substitute for Bombs



Spell, loaded from the Revo's PsiWin CD

composing custom alarm sounds or simply playing back snatches of music might well appreciate something which can handle EPOC sound files. These can of course be simply loaded from a larger EPOC machine or converted using PC utilities. By loading files straight into the \System\Alarms folder they can be played and tested within the Revo's Time application. For more convenient access and greater control, the shareware **SoundTrans** not only loads, plays and saves EPOC sound clips, but also Windows WAV, SIBO WVE and raw GSM sound formats.

Bombs

There's no direct replacement for this little 'Minesweeper' clone that shipped with the Series 5, but don't worry, there are several other completely Revo-compatible games to keep you amused: **Atomic** (a 'Tetris' clone), **Chain Reaction** (a similar strategy game to Bombs), **Fairway** (my own golf game) and **DeVender** (a fast and furious clone of the old Defender arcade game).

Spell

Although not installed in the Revo ROM for space reasons, Psion have at least provided this on the PsiWin CD that comes with it. If you need a spelling checker and thesaurus then just install it from the CD interface or go hunting for the 'spell.sis' file manually and install it in the usual way. The installed file will take up around 800K of your precious 8MB RAM.

Overcoming oddities

Even using just the recommendations above, you'll encounter a number of minor limitations and oddities on the Psion Revo. Although many application authors write programs intelligently enough to work on a wide range of screen sizes, few of them considered that Psion might make the screen smaller again after the Series 5. As a result, there are bound to be occasions

where buttons just 'miss' the screen or where dialogs don't quite fit properly. Or, in the case of games, where they don't work at all.

You can, of course, simply delete the offending program and go on your way, although this helps neither yourself nor the application author. Most developers are friendly and helpful people and will welcome an approach from a Psion Revo owner. You'll usually be able to contact them by email, which has the advantage of being both free and immediate. And unless there are fundamental problems with downsizing an application (such as the work required to redraw all of a game's graphics), it's a fairly safe bet that a new 100% Revo-compatible version will follow shortly.

Accessories

The use of a mandatory docking station has rather hampered the production of hardware accessories for the Revo, as any cables or adaptors would have to sit at the end of an extra metre or so of cradle wiring. Psion see the Revo very much as a lightweight handheld though, intending any extra electronic connections to be done solely via the infrared port.

A small number of GSM mobile phones with built-in modems can connect wirelessly to the Internet via the Revo's infrared window. If your phone doesn't have infrared capability and a built-in modem (and can't be adapted via a plug-in module), there's always Psion's own 56k **Travel Modem**, which we reviewed in issue 27.

The Revo's shape, size and styling all cry out for it to be carried as-is, in a jacket pocket or handbag, but anyone contemplating using it to keep a journal on an expedition or just planning to throw it in the bottom of a rucksack should still consider a good case. The almost indestructible plastic **Palm-Tec Shell** (shown here) is the most

Constructing your own plug-in battery pack for the Revo

Revoworld, your first stop on the 'net for Revo-specific content

obvious choice, but most case suppliers and dealers can supply soft leather alternatives.

As with the Series 5, official styli for the Revo are available in packs of three, should you ever misplace the original. And for die-hard Revo power users, POD (see page 132) are planning both a lightweight **travel kit** and a **car stand**.

Finally, if your skills are up to it and you're feeling very adventurous, **Revoworld** have published an article on constructing a **battery recharging pack**, using a few cheap components from your local electronics store and four AA batteries.

Maximising your memory

Although it would have seemed vast a few years ago, 8MB doesn't go very far when faced with a 32-bit operating system and potentially large reference applications. It's also not recommended to push your memory to its limits—EPOC is more robust than many other systems, but funny things still happen when it gets chronically short of free RAM. Apart from the obvious tactic of being extremely selective in what you install, there are many ways to save space on your Revo's internal disk by delving ever deeper into the normally-hidden System folder. See 'Inside the System

folder' in issue 28 for a full breakdown of where to look and what to delete. If you decide to install the Web or **Opera** web browsers, for example, watch out for large cache files. Neither are particularly efficient or speedy and if your needs are simple you're probably better off waiting for Psion's promised **WAP browser** (see also page 87), which will run more quickly in less space.

Installing **RMRZip** may also be a possibility. By keeping larger document files and applications zipped until you actually need them, you may well save more space than the 400K which RMRZip takes for itself.

See also

Remember that the vast majority of *Palmtop* magazine's content is equally suitable and relevant to all EPOC devices, including the Revo. If you're looking for Revo-specific content on the web, your first stop should be Revoworld, at *www.revoworld.com* . This features news, reviews and articles by Revo owners. Forums allow you to read and reply to existing messages or post information or questions. Every month there are also prizes for published reviews and articles.

Availability

Sketch for Revo - free, *www.penreader.com*

RMRArt - £12, *www.rmrsoft.com*

Draw5 - £25, *www.interconnex.co.uk*

MBMView - $25, *ourworld.compuserve.com/homepages/platodva/psion.htm*

EasyFax - free, *www.psion.com/series5/s5easyfax.html*

OPL+ - £15, *www.neuon.com*

SoundTrans - £12, *www.rmrsoft.com*

Atomic - free, *3lib.ukonline.co.uk*

Fairway - £12, *3lib.ukonline.co.uk*

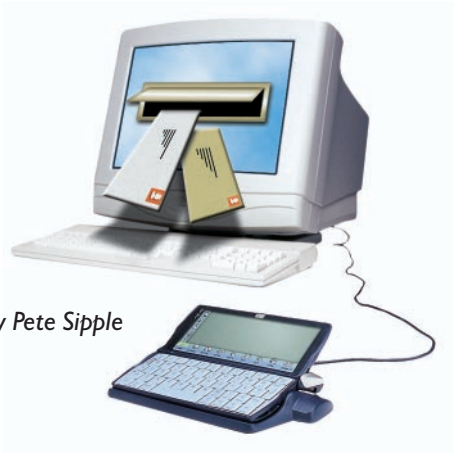
Chain Reaction - £10, *www.neuon.com*

DeVender - £10, *www.rmrsoft.com*

Palm-Tec 'Shell' - from £25, *www.palmtec.com*

RMRZip - £15, *www.rmrsoft.com*

Email in depth



In the final part of our three part series we look at file attachments, netiquette and add-on utilities

by Pete Sipple

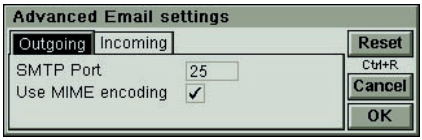
Handling attachments

When sending email from your palmtop, it's possible to attach binary files to the message, typically a document of some kind. But there's one potential problem: most of the files that you'd want to send can only be read by other EPOC devices. Sending your masterpiece back to the office as a Psion Word document isn't going to be much good unless the person receiving your mail happens to have PsiWin installed on their desktop computer. Before sending a file, take a moment to think about how it will be handled at the other end.

One way to ensure that your document gets through is to save it as text using 'File | More | Export as text file' (in Word). Similarly, receiving file attachments in anything other than native EPOC format is equally problematic. Psion have made an attempt to address part of this problem by providing a Microsoft Word 97 viewer within their Email application. When opening such an attachment, you will notice that most of the formatting will be missing and that the file is read-only, but at least you can read the basic text and save it for later editing.

Adding an email attachment

EPOC's Email program can send attachments either as MIME (standing for Multipurpose Internet Mail Extensions) or UUencoded (originally standing for Unix-to-Unix encode) files. These two coding standards are the most common methods used to convert non-text files into a text format that can be sent via email. They are automatically coded when sent and then decoded when opened at the other end. MIME is generally more efficient than UUencoding and is the default format used by Email. It is possible to send files UUencoded though, by unticking the 'Use MIME encoding' option found in 'Tools | Account settings | Advanced'. BinHex is yet another method of file transfer by email, most commonly seen in the Apple Macintosh world, and is not currently supported by EPOC devices.



Setting your account to MIME encoding

Contacting your Contacts

Contacting friends, family and work colleagues by email is an excellent way to keep in touch. Although we all know lots of people with email accounts, the actual addresses are often difficult to remember. When creating an email account, we all look for the easiest address possible, but those with common names tend to find that *jsmith@aol.com* was taken years ago and have to settle for something like *Jason481@hamster.freeisp.co.uk* instead. Obviously, this is where EPOC's built-in Contacts application comes in handy—we already use it to track phone numbers and it follows that we should keep email addresses there as well.

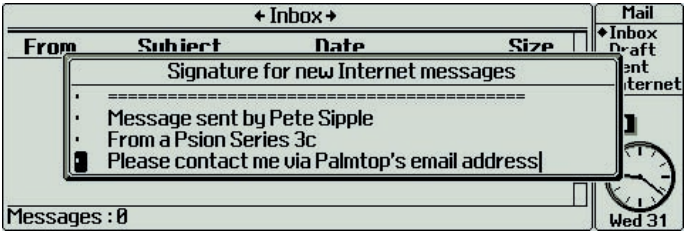
Retrieving an email address from within EPOC's Email application is pretty straightforward. From the 'New email' screen, tap the 'Address' toolbar button and you'll be presented with a cut-down list view of your Contacts. Sadly, this view doesn't filter out those entries without an email address, so if you have a lot of contacts you may need to do a lot of scrolling. On my Series 5mx, it's not possible to start scrolling down the list until it's completely loaded, which can be frustratingly slow. To speed things up, select 'Find' and search in the normal way. Note that unless the email address is in the designated 'Email' field in Contacts, you won't be able to paste the address into your new message.

When reading a new message, note the 'Add address to contacts…' menu command, which copies the sender's email details into a new blank entry in your Contacts store. You'll still need to fill in all the other details manually, though.

Using Contacts to address an email

Speeding up and automating text entry

One notable omission from Email is an option to allow you to append a



Handling email signatures automatically using PsiMail Internet on the Series 3

standard 'signature' to your outgoing message. Most desktop email clients, corporate email systems and (curiously) the Series 3 PsiMail Internet application allow for such blocks of text to be added by default, either as a way of providing additional contact details, a favourite quote, a disclaimer or legal message. While it's possible to achieve the same result with a macro, or by cutting and pasting from an application such as Jotter, you may want to consider a shareware signature solution—see the Resources section below.

As with any form of correspondence, there are many elements of email messages that you have to type in time and time again. Apart from 'signature' details as discussed above, there are undoubtedly lots of common words and phrases (sometimes known as 'Cliptext') that you use frequently in your messages. There are a number of add-on programs that allow you to allocate hot-keys to words and text blocks that you have defined yourself. We'll be featuring all of these in an in-depth article in the next issue of *Palmtop*, but some good places to start are ExtraBars (discussed on page 41 of this issue), HotKeys (covered in issue 24), Macro5 (covered in issue 25) and several others. They can save lots of time and unnecessary finger strain if you have to compose a lot of emails.

Take it to the limit

Hopefully, we have now covered most of the finer features of emailing from an EPOC palmtop. Here are a few final hints and suggestions:

- **SMS and fax** - EPOC's Email software can also handle other message types. If you have an infrared mobile phone and make a lot of use of SMS, consider using Email for your text messages. And although the Revo has no built-in fax capability, it's easy using Email on any other current EPOC device.
- **Auto-send on opening** - From an email account's settings screen, consider selecting 'Auto send on opening'. This option automatically sends all mail in your Outbox when you make a connection, without having to remember to send manually—a good way to ensure that you don't forget to send messages.
- **Draft folder** - Instead of saving a message straight to your Outbox, consider saving any unfinished mail into the Draft folder. You can leave it there, safe in the knowledge that it won't be sent by accident—though do remember to move it to your Outbox when you're happy that it's finished.
- **Spell check your mail** - If your palmtop has a spelling checker installed, you can check your message for mistakes before

Other Email-related resources

You may like to check out some of these third party Email-related add-ons available:

AlterNet - Lets you store information about your favourite web and email addresses, write 'Quick Emails' and add signatures. At present it only runs on ER3 (the Series 5 'Classic'), though an ER5 version is under development. *www.neuon.com/apps/alternet* .

Companion - Allows you to add signatures to the end of email messages on EPOC devices. Also acts as an email and fax address book, especially useful for ER3 users. *robertcl.tripod.com* .

MfolderLite - An add-on for ER3 that allows for improved archiving, filing and filtering of your Inbox. *www.planetepoc.com/hosted/dpearce* .

PassThru - Uses the serial port of EPOC (and some Series 3 family) machines to make use of a modem connected to a desktop PC. *kevin.millican.net/Home/PassThru.htm* .

SignIt - Another EPOC signature tool, this time freeware. *pda.tucows.com/epoc* .

You may also want to take a look at the following sites for some alternative email solutions:

Advansys - Products include eSync and LinkWise, which allow for a wider range of email synchronisation solutions than PsiWin alone. All EPOC computers are catered for, as well as a GroupWise solution for some SIBO machines. *www.advansyscorp.com/products.htm* .

PsiCix - This allows you to connect to CiX (pronounced 'kicks'), the Psion-friendly UK-based email and conferencing service. Download the latest version of the software from here and follow links to other sites containing information about using your Psion online. *www.psicix.co.uk* .

Mail2pda - With this free service, you can access your POP3 email with just a web browser. You can't send an email with this service, but can read your mail from any desktop machine with a browser, use the 'lite' web version optimised for palmtop devices and even access mail from a WAP-enabled mobile phone. *www.mail2web.com* .

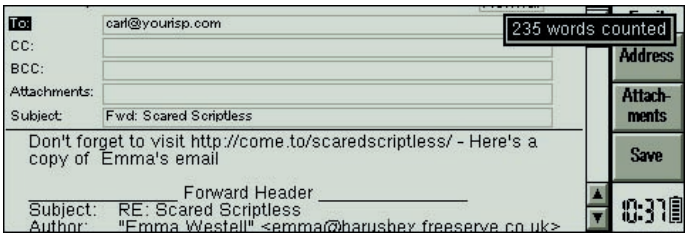
Improved messaging with Companion

Netiquette

To make the most of your email experience, it's worth knowing some of the basic 'rules' that have become widely adopted over the years:

- Emails tend to be more informal than traditional written correspondence. Before starting an email to a new contact, take time to think about the recipient and how they would like to be addressed. "Dear sir" and "Yours faithfully" is probably far too formal for most people, and "Hi" probably isn't suitable for a first-time contact.
- If sending a mail from work, or to someone with a work email account, bear in mind that many companies have a policy limiting the use of email for personal messages. If in doubt, check first.
- Think twice before emailing very large file attachments to users unannounced. If connecting via a mobile phone, a large download might take hours, costing money and preventing other messages from getting through.
- Don't be too quickly offended. When sending an email, it's all too easy to assume that the recipient will understand that something you've written is intended as a joke. The reader can't see your expression or hear the tone of your voice, so if you're making a joke or having a subtle dig, end the sentence with an emoticon (see below). Emoticons and acronyms are a way of abbreviating common sayings or indicating a mood. You can find a fairly comprehensive list of email symbols and codes at *www.pb.org/emoticon.html* . Here are a few common examples:

:-)	The traditional 'smiley', representing happiness or lighthearted sarcasm
:-(	Sad or angry
:-0	Shocked (or bored)
;-)	A wink, perhaps indicating a subtle joke, or that you're not serious
<g>	Grin
BTW	By The Way
FWIW	For What It's Worth
IMO	In My Opinion
IMHO	In My Humble Opinion
LOL	Lots of Luck, or Laughing Out Loud
OTOH	On The Other Hand
ROTFL	Rolls On The Floor Laughing
TIA	Thanks In Advance (or Anticipation)
TVM	Thanks Very Much



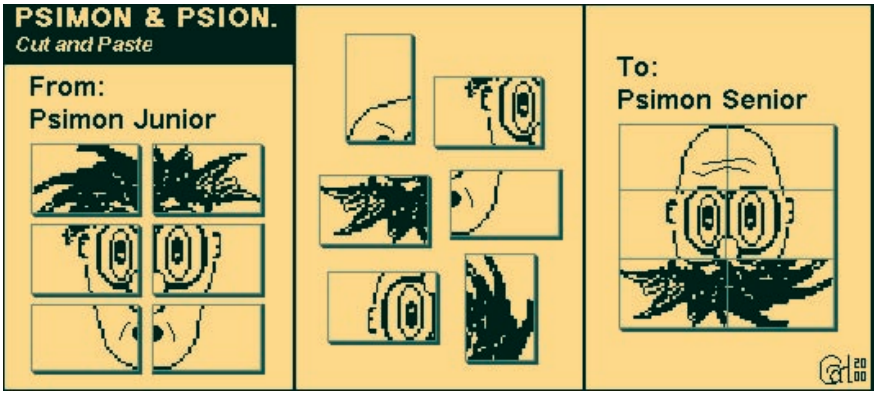
Counting the words in a forwarded email—perhaps not Email's most useful function

sending. In the message editing screen, you'll find this option on the 'Tools' menu, together with the slightly less useful 'Word count'.

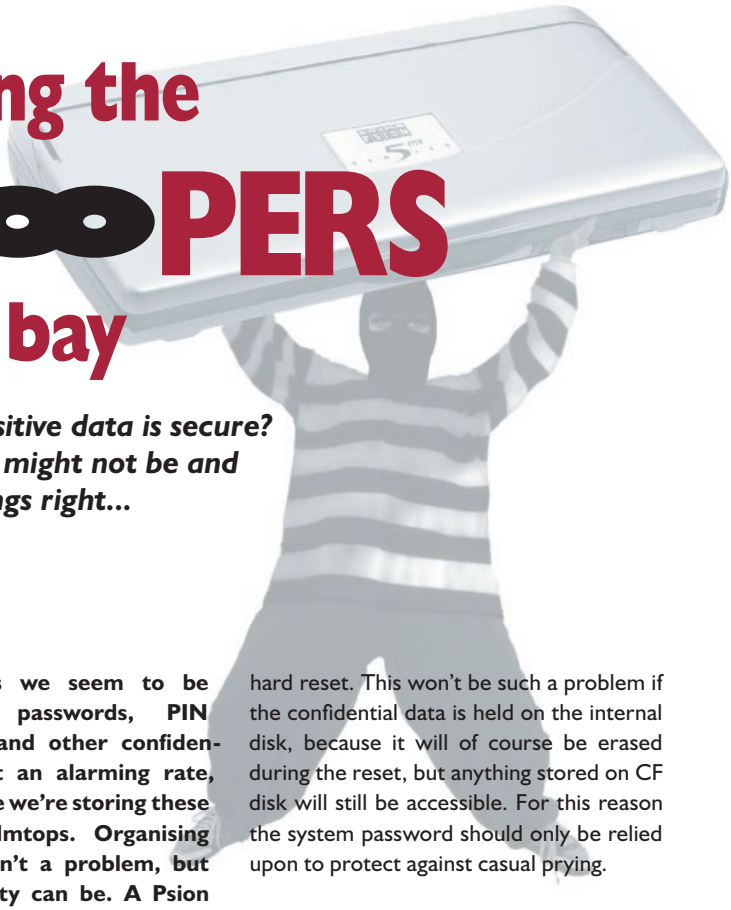
- **Quoting your messages** - It's often useful to include the original message when replying, to save the recipient having to hunt through their 'Sent' folder to check what was said. If using an expensive mobile connection though, you may want to save money by disabling this option. In the message editing screen, look for 'Editor preferences…' on the 'Tools' menu.

Stop Press

As we went to press, Neuon had just released the first alpha version of a new Word-to-RTF text convertor. Eventually this utility will also help with conversion of Sheet files, and should help enormously with sending EPOC data by email. See *www.neuon.com* .



Keeping the SNOOPERS at bay



Think your sensitive data is secure? Find out why it might not be and how to put things right...

by Nigel Wright

These days we seem to be amassing passwords, PIN numbers and other confidential information at an alarming rate, and for convenience we're storing these on our Psion palmtops. Organising this information isn't a problem, but ensuring its security can be. A Psion and its contents are most likely to be at risk in the workplace, where fellow workers can 'play' with your machine or generally snoop around. It's also a worry when travelling, with the risk of robbery or accidental loss.

It might not always be possible to prevent the theft of your Psion, but the data within it *can* be protected.

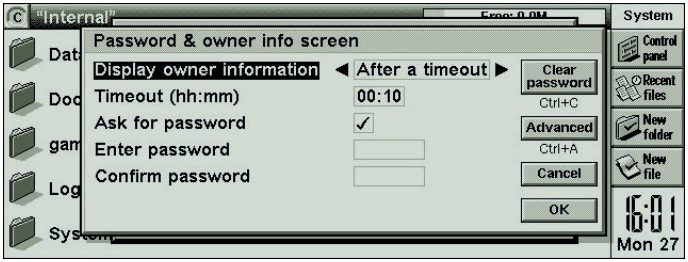
The system password

This is the most basic level of EPOC security and is easily defeated by performing a hard reset. This won't be such a problem if the confidential data is held on the internal disk, because it will of course be erased during the reset, but anything stored on CF disk will still be accessible. For this reason the system password should only be relied upon to protect against casual prying.

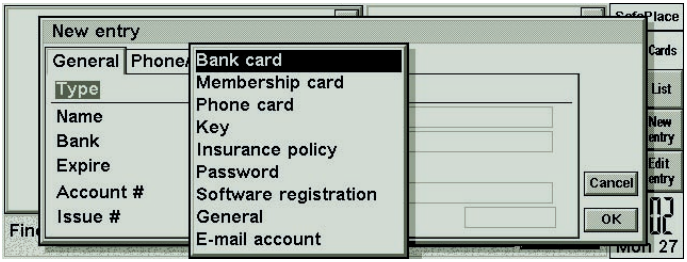
Controlling the system password

Locker, from Macro5 author Pascal Nicolas, allows greater control over the system password. The password can be activated after a user-specified timeout, at switch on, or once a day. When in use it overrides the system settings, but restores them again once it is closed down. Locker also has a useful shortcut key to turn off the Psion and activate the password at any time.

One way of using Locker would be to ensure that the system password is activated



Configuring Locker to your personal preferences



Useful and free—making an entry in SafePlace

between certain hours only. For example, **CronTab** (see issue 25, page 86) can be set up (using a macro) to launch Locker at 8am every day and close it down at 5:30pm, with Locker itself being configured to turn the Psion off and activate the password after 10 minutes.

Password protecting documents

There's no built-in password protection for Data files, which seems a little odd as this is where many of us are tempted to store passwords. Password-protected Word and Sheet files can be used instead, but they *aren't* totally secure because information within them isn't scrambled—anyone with a hexadecimal file viewer or editor can examine and read the contents. We wouldn't recommend using either Word or Sheet for particularly sensitive information.

SafePlace

Palmtop Software's **SafePlace** (reviewed in issue 24) is specifically designed to provide secure storage for things like passwords, and comes with a number of predefined labels for different types of confidential entry. Version 1.1 has recently been released and contains some significant enhancements,

CodeSafe offers basic secure database facilities

including the ability to use more than one database. It's an excellent application that will meet the needs of most people, and it's completely free.

CodeSafe

CodeSafe also offers a secure database and can be used either as a standalone application or as a macro. It can get a bit unwieldy when more than a few pieces of data are entered, and it doesn't allow more than two lines of data in any one entry. However, if all you need is something basic in which to store a few numbers then CodeSafe is perfectly adequate.

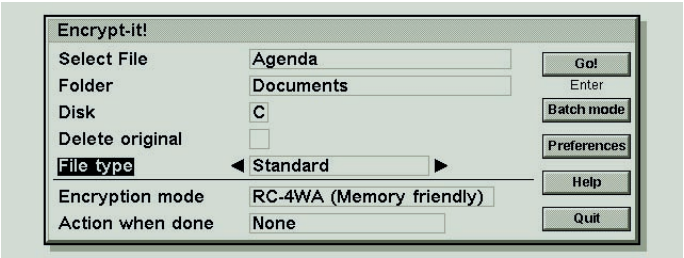
Encryption utilities

Although SafePlace is a great place for storing passwords, the lack of control over formatting and the inability to protect other file types is rather limiting. If you need more flexibility then there are a number of general encryption utilities which are more versatile because they can be used to encode virtually any file type. The downside is that large amounts of computing power are needed—on a Series 5 Classic they're painfully slow, but the power of the ER5 (Revo, 5mx, Series 7, etc.) palmtops has speeded things up somewhat.

The level of security offered by encryption generally depends upon two things: the number of characters contained in the password and the level of encryption employed (e.g. 64-bit, 128-bit, etc.—generally the more bits the harder the encryption is to 'crack'). Encryption is often so secure that encrypted files can't be hacked without *very* considerable effort, needing access to multi-million pound supercomputers for long periods of time.

Currently there are three encryption utilities available for EPOC: **Encrypt-It!**, **FreeCrypt** and **Crypto**. All three work in a very similar manner:

Encrypt-It! offers plenty of options and good security

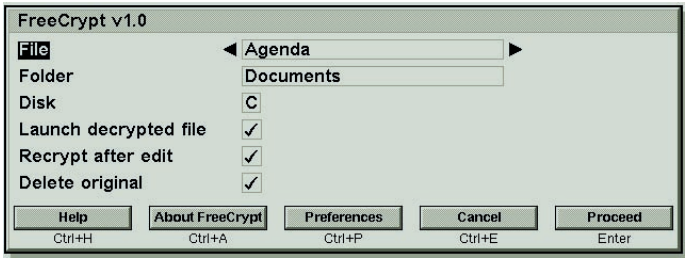


Security tips

- Choose a password with at least 5 characters and make it easy to remember.
- Passwords should contain a mix of alphabetic and numeric characters, for added security.
- Don't choose an obvious password, such as your partner's or pet's name.
- Try not to have too many different passwords, otherwise you might forget them.
- Change the password regularly, according to the degree of risk and confidentiality needed.
- When using encryption always keep a non-encrypted backup hidden somewhere safe (*not* on your palmtop), in case something goes horribly wrong.
- Back up frequently. If your Psion is stolen then at least you still have the data.
- Don't leave your Psion unattended in public places - keep it with you.

1. Files are selected for encryption using a dialog box.
2. Once encrypted, the original file is deleted, leaving only the encrypted file behind.
3. The encrypted file can then be opened by tapping on it, which launches the encryption application and prompts for a password.
4. When the correct password is entered, the encrypted file is decoded and opened by the application that originally created it.
5. The encryption utility then sits in the background, waiting for the file to be closed again. When this happens, it comes to the foreground, re-encrypts the file and again wipes the decrypted version.

This procedure is largely smooth and fuss-free, despite the complicated-sounding list of steps above. You should be aware that when using an encryption tool, open (and thus decrypted) files *are* of course vulnerable, so when you've finished using the file make sure you close it down immediately for safety.



Preparing to encode a file with FreeCrypt

The flexibility to encrypt many different file types—Crypto in action

Which application you choose is really a question of size, speed of operation, and whether or not you're prepared to pay for your solution. Each has its own unique features.

Encrypt-It! is probably the most secure because it also protects the password by using encryption, so even if the same password is used for all files, the encrypted password itself will differ in each case. It also has a handy batch mode feature that allows the encryption of entire folders in a single pass. Unfortunately, operation of the shareware version is badly hampered by the numerous 'nag' screens, making it difficult to evaluate Encrypt-It! effectively.

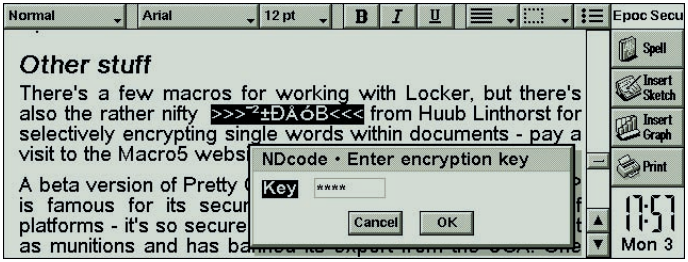
RMRZip

RMR Software's famous 'Zip' utility also allows password encryption of zipped archive files. It's more awkward and therefore slower than using Crypto, Encrypt-it!, etc. because it's designed primarily for file compression and archiving rather than encryption. **RMRZip** doesn't automatically launch files when the archive is opened and this makes it less suitable for protecting information that needs to be accessed quickly on

Creating a secure database

- Create a new Data or Jotter file.
- Define labels (if using Data) to suit your needs, e.g. Title, Password, PIN number, Registration key, etc.
- Enter your information.
- Use an encryption utility to encrypt the file (select the option to delete the original source file).
- Assign a Macro5 shortcut to the encrypted file, e.g. [Fn]+[a]. See issue 25 for an overview of Macro5.

Whenever you need access to this file, use the Macro5 shortcut. This will automatically start the encryption utility, which will in turn prompt for a password before launching the file.



NDCode, which can encrypt individual words or phrases within documents

a regular basis. The encryption should also not be regarded as completely safe because utilities exist that are specifically designed to 'crack' ZIP archives.

Other options

There are also a few Macro5 macros available for working with Locker, plus the rather slick **NDCode** from Huub Linthorst for selectively encrypting single words *within* documents—pay a visit to the Macro5 web site for more details.

An EPOC version of **Pretty Good Privacy** is now available in beta form. PGP is famous for its secure encryption across a number of platforms and it's so secure that the US Government originally classified it as munitions and banned its export from the USA! One of the distinct advantages of PGP is its ability to encrypt not only entire files, but selections of text and emails as well.

Recommendations

If you need to protect many different types of file with high levels of security then use an encryption utility. On the other hand, if all you want to do is store snippets like PIN numbers then Palmtop Software's SafePlace is a good choice.

It's easy to get overly worried about security—you can end up making your data so secure that it also takes *you* ages to get to it! Always use common sense and an appropriate level of security for the type of data you're storing.

Availability

Crypto - freeware, *www.salvis.com*

Encrypt-It! - shareware (£16), *www.pocketiq.com*

SafePlace - freeware, *www.palmtopsoftware.com*

FreeCrypt - freeware, *www.firedrake.demon.co.uk/psion*

Locker, **Macro5**, **CodeSafe** - all freeware, *pnicolas.EpocBoulevard.com*

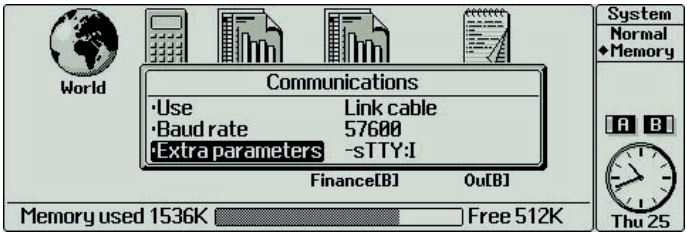
PGP for EPOC: freeware (for non-commercial purposes only), *www.pansoftware.com*

When the Series 3c and Siena models were introduced in 1996, one of the chief hardware improvements was the inclusion of an infrared (IR) port for communications use. The ability to send data between computers or to print without cables was (and is) an obvious advantage over earlier models, though much of the world hasn't really caught on yet—the majority of new computers and printers still lack any IR capability. Luckily, the printers which do feature IR sensors are directly supported by the 3c/mx, such as the HP Laserjet 4/5/6 (using the Laserjet III driver) and certain Canon bubblejet printers. The Canon printer also has an optional battery pack, making for completely wireless operation. The little Psion Siena didn't come with IR printer drivers installed, but it is a simple matter to download them from Psion's web site and install in the usual way.

A Bug's life

Where two or three SIBO palmtops are gathered together, data can be exchanged using infrared. Simply highlight a file on the System screen (or an Agenda or Data entry), aim the IR windows at each other and press [Psion]+[Tab]. The sending palmtop communicates with the receiver and the data flies from one to the other. Usually. The 3mx has a bug however, which means that files from a Siena are recognised as twice their real length. In practice this means that the Siena finishes sending the data, but the 3mx hangs on for the mythical 'rest of the file', and eventually complains that the file hasn't been transferred.

A little known trick can be used to get over this file transfer problem. On IR-equipped Psions, the serial port is referred to (in programming circles, mainly) as TTY:A and the IR port as TTY:I. Normally, serial communication (such as for PsiWin) is via



Setting up link to use the infrared port

TTY:A, but it can be redirected to the infrared port. From the System screen, press [Psion]+[L] (for 'Communication') and select 'Link cable' (not IR). In 'Extra parameters', type "-sTTY:I" and press [Enter]. The link icon will now appear on the status window. Do this on both Psions, point them at each other and run the Files application. The disks on each palmtop will now appear as remote (REM::) disks and files can be copied from one to another as if they were connected by a cable. Individual Data records and Agenda entries can't be transferred in this way, but it certainly makes copying multiple files and directories very straightforward.

This trick will also work with some laptops and PCs with infrared ports, although there are some caveats. You still need PsiWin running, in order to transfer data, and the PC must use a physical COM port as its infrared port. Windows 98 on newer computers tends to just emulate a COM port, which PsiWin (1.x or 2.x) doesn't like. Set up the Psion as above, then select the IR COM port within PsiWin. Point the Psion at the PC's IR eye and with a fair wind you'll get a connection. Be warned however that there are so many variables involved that you could spend an awfully long time fiddling around, and still get nowhere. If wireless communication is your goal however, it can usually be done with a little perseverance. A good way to check whether the infrared is actually being sent is to look through a video camera. These are sensitive to infrared light, and can give useful feedback.

Stuart Gray

Archive gems

Although this brings to a close our regular series covering the Series 3 (SIBO) range, all the editorial team remain big fans of this classic pocket computer. For most of us, the Series 3 Classic and 3a were our first experience of truly mobile computing and have a special place in our hearts.

The first three volumes of *Palmtop* magazine contain a huge amount of SIBO-related material, all of which still forms a excellent reference for anybody inheriting a second-hand Series 3. Over the three years covered by issues 1 to 18, we reviewed hundreds of software and hardware products, ran tutorials on each of the main Series 3 applications and published many special interest features, hints and tips. Almost all back issues are still available (now at reduced prices), should you wish to look up any of the following highlights:

'**Name that cell**', in issue 1, was a tutorial on using range names in Sheet.

'**Beyond Data**', in issue 2, rounded up three replacements for the Data application.

'**Something to draw on**', in issue 3, reviewed five painting and drawing packages. In the same issue, '**The Emulation game**' looked at setting up your PC to emulate a Series 3a and you can probably guess what was covered by '**Macros on your Series 3a**'.

'**The Perfect Reader**', in issue 4 (no longer available), introduced compressed electronic texts and how to read them, and '**Managing your files**' reviewed all the file manager options for the Series 3a. Spanning issues 4 and 5 was '**Case for the defence**', a roundup of all the Series 3 case solutions available at that time.

'**Making contact**', in issue 5, looked at the main contact management contenders.

'**Calculate!**', in issue 6, reviewed three different add-on advanced calculators. In the same issue, '**The Psion of the future?**' looked ahead to today with some surprisingly accurate predictions.

Spanning issues 6 to 11 was '**Working with Word**', a comprehensive tutorial series on getting more from the built-in SIBO word processor.

'**Getting personal with Purple**', in issue 7, was an in-depth interview with the two founders of Purple Software, '**Build your own SSD drive**' went into gory electronic detail for those handy with a soldering iron, and the same issue featured '**The Bible on your 3a**'.

'**Taming the Cyclone**', in issue 8, got to grips with the Series 3 floppy disk drive, and in the same issue was another visit to the land of the SSD drive, this time making it work with flash disks. And '**Banking on your Psion**' was our first comprehensive round up of money management software for the Psion.

The rightly-famous John Boyce was featured in an interview in issue 9, together with a guide to using GPS with a Series 3.

'**Steve's Siena Spot**' started in issue 10 and ran for about a year, exploring the world of Psion's smallest ever palmtop. Also in issue 10 was '**Convert!**', a detailed roundup of unit conversion utilities.

'**A question of memory**', in issue 11, went into detail on the different types of Psion memory and how to get the most out of them, and in the same issue '**Printing on**

the move' reviewed all the portable printers available at the time.

'**A helping hand with Word**', in issue 12, wasn't a tutorial, funnily enough, but a group test of all the different macro and text assistant utilities available. Issue 12 was very much a 'Sheet' edition, with '**Making a date**' looking at using SIBO Sheet's limited date-handling facilities, and with the start of a major tutorial series '**Working with Sheet**', which ran until issue 19. Also of note in issue 12 were '**Breathing new life**', a software guide to making your 3a perform like a 3c, and '**Getting online with PsiMail Internet**'.

From issue 13 onwards, EPOC and the Series 5 started to take over magazine space, but you might also like to note:

'**Finding your way**', in issue 14, a roundup of mapping and navigation software, '**The inside story**', also in issue 14, which went behind the scenes at POS Ltd, the famous repairers, and '**How to connect your Psion to the Internet**', in issues 17 to 20, which contained a wealth of Series 3-specific information on getting online.

'**Programmers Workshop**' ran right through the first three volumes and covered everything from a simple example OPL program to some fairly advanced OPL/16 hints and tips.

Steve Clack and Steve Litchfield

Availability

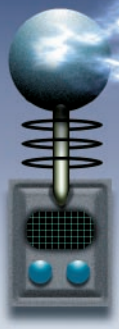
Infrared on the Psion:

www.geocities.com/SiliconValley/Heights/5596

www.geocities.com/SiliconValley/Lakes/3947

Infrared drivers for Siena are on the Palmtop CD or on *www.psion.com/downloads*

PsiWin 1.1 is still available at *www.psion.com/year2000/upgrades/psiwin1.html*



Working for a living: The Scientist

John Midgley shares some insights into how his EPOC computer fits into his day to day work as a scientist

The word 'Scientist' is a catch-all term that covers a multitude of sins: social scientists at one end, theoretical physicists at the other and many between, all with different computing requirements and expectations. Most scientists work in standard office environments where they have access to relatively stable power supplies, temperature regimes and network connectivity. In most of these environments, regardless of computing requirement, the beige PC is ubiquitous. Unless you dabble in quantum physics or meteorology you can easily get by with a fast PC or server/workstation arrangement (workstations increasingly becoming the norm).

As a scientist (specifically, a Geoscientist), my computing requirements are relatively straightforward. Of course, I need access to a word processor and spreadsheet plus (increasingly) access to email and the Internet. I also need a database and specialist bespoke programs, as well as graphics packages of varying complexity. All the items I require are present on networked PCs in most of the offices in which I work. When collecting data outside the office environment I require less raw computing power but definitely need something robust and forgiving. So far, a Psion Series 7 is the best compromise between computing power and usability that I've found.

Why Psion?

Initially I had a requirement to do certain flow and volume calculations rapidly. I also had to be able to alter parameters to model an optimum environment and, never being very good with a calculator (the belief that all scientists are natural mathematicians is a myth), I purchased a Psion Organiser II. Although good, it was still often quicker to use a common Hewlett Packard calculator, even when changing parameters, as HP programs had evolved to cover most of the basic calculations I used.

The launch of the Psion Series 3 was a dream come true: a real spreadsheet that one could carry in the pocket. You could write your own sheet or (even better) download your already-tested Excel or Lotus 123 sheet, provided that you removed workbook links and altered calculations accordingly—not always an easy chore but definitely worthwhile. For most of the scientists and engineers I was working with in the field the Psion became the natural

choice, with people ditching their various Sharp and Casio calculators. Many companies allowed employees to purchase a Psion Series 3 on expenses once they found out how easy it was to use familiar spreadsheets and to program bespoke applications.

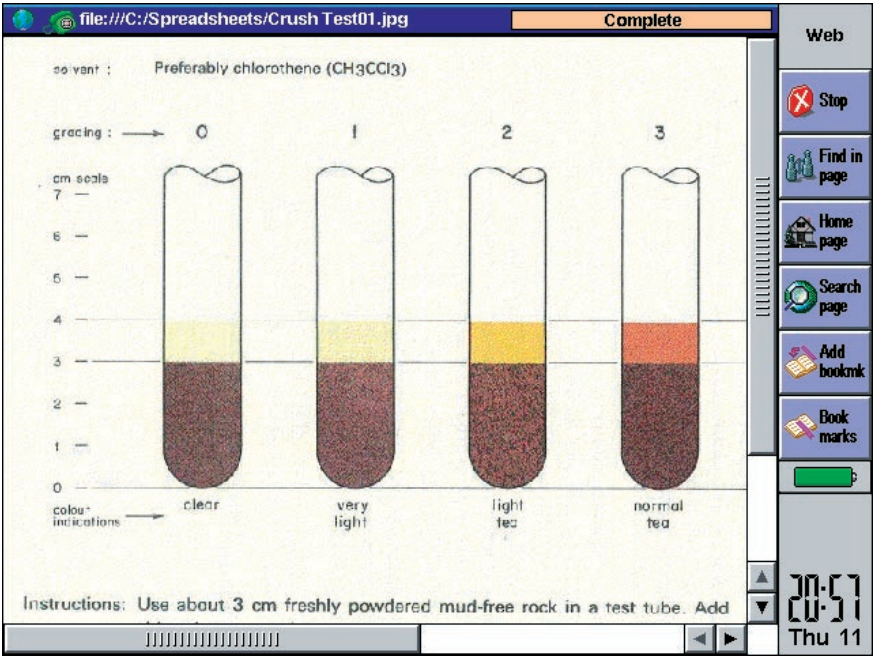
I progressed through the Series 3a and 3c, and like many I found that although initially I used it for a specific feature (the spreadsheet) the other applications were also very useful. Word enabled me to write comprehensive reports while on the move, and Contacts and Agenda easily replaced my address book and diary, with the latter's To-do List keeping track of outstanding items. Although all reports and calculations were written on the Psion it was with the intention of transferring to a PC for final checking and formatting, using Microsoft Word and Excel. I recall that Excel used to round numbers in a different way, but not enough to make a great deal of difference to my calculations.

Another benefit of using the Psion range of machines is build quality. I have *heard* many cases of battery cable failure, hinge problems and failing screens, but so far I have avoided all of these, despite severely punishing my various machines. The Series 3 models were regularly exposed to desert conditions (temperature extremes, penetrating sand and condensation) that proved too much for laptop computers. They were regularly dropped, both open and shut, and beside the odd scratch have always worked, even after falling into a water pit where I was taking samples. More recently my Series 7 has been treated a little better, but has still operated in areas where people fear to take a laptop, such as waste sites, quarries, beaches and labs with a record of frying people's laptop machines.

Another big plus point for me was that the use of AA batteries in the Psion Series 3 and Series 5 ranges allowed use in gas-hazardous zones where laptops (with higher capacity and higher voltage batteries) were not allowed.

Accuracy and precision

Where the Psion machines have made the greatest difference to my work routine, a difference I initially didn't recognise, is in the collation of primary data. This is the first set of observations of any experiment or examination: get it wrong and the mistake is not only carried through *your* work but also through the work of anyone who follows on. Errors in primary data collection can arise from an erroneous observation—we can all make mistakes—but as a scientist you are trained to check for accuracy and precision, the cornerstone of good scientific practice.



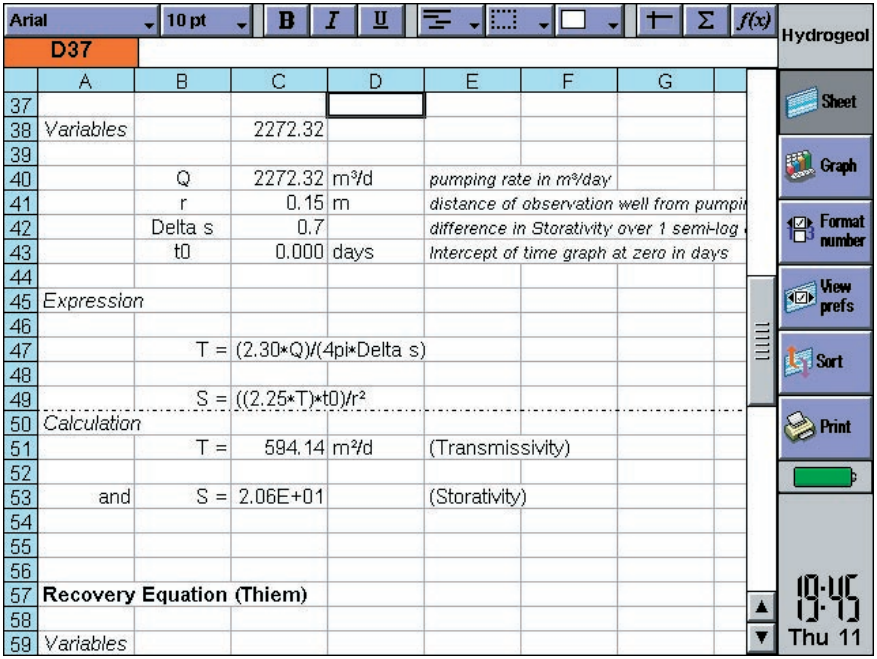
My aide memoire when reviewing test tube crushed rock samples for hydrocarbons

I find the vast majority of errors occur in transcription. A good parallel being prescriptions of medical doctors (apologies to doctor readers), who have gained a reputation for having writing that is indecipherable and therefore of limited accuracy—12 point Arial text is much easier to read and reduces inaccuracies in the process.

Initially I only started recording numerical data into Sheet, for rough (mainly statistical) field analysis, as this let me know if I had collated enough data to make a representative sample. As I came to grips with Word I began using the Psion to record descriptive data which not only reduced errors through poor handwriting, especially in the wind and rain with cold hands, but also encouraged me to think more about what I was writing and to describe things in a more logical order. From this it was simple to compile a proforma on the Psion and to save it as a template. I also had the added bonus of being saved the embarrassment of common spelling mistakes with scientific terms, once the correct spelling was added to the spell checker.

The EPOC era

When the Series 5 was launched I immediately made the upgrade, being greatly impressed by a keyboard that made data entry not only quicker but also more accurate. It was this palmtop which freed me from the need to reformat interim reports on a PC, especially as modern printers are often equipped with infrared ports.



	A	B	C	D	E	F	G
37							
38	*Variables*		2272.32				
39							
40		Q	2272.32	m³/d	*pumping rate in m³/day*		
41		r	0.15	m	*distance of observation well from pumpi*		
42		Delta s	0.7		*difference in Storativity over 1 semi-log*		
43		t0	0.000	days	*Intercept of time graph at zero in days*		
44							
45	*Expression*						
46							
47		T =	(2.30*Q)/(4pi*Delta s)				
48							
49		S =	((2.25*T)*t0)/r²				
50	*Calculation*						
51		T =	594.14	m²/d	(Transmissivity)		
52							
53	and	S =	2.06E+01		(Storativity)		
54							
55							
56							
57	**Recovery Equation (Thiem)**						
58							
59	*Variables*						

My field spreadsheet for water well pump test data to calculate speed of recharge

One small downside of the '5' was that under certain lighting conditions the screen contrast was poor, making me eager for an improved replacement. My ever-increasing requirement for quick access to (and entry of) information and to remain in contact was catered for by the launch of the Series 7. I now use it to record all data and observations, pasting them into email messages as plain/tabulated text and then sending via my mobile telephone. This data is then waiting for me upon return to my office desktop, where it can be processed. Numeric data is cut and pasted directly into a complex spreadsheet package and descriptive data is pasted straight into word processor reports or graphics programs with ease. Doing things this way also releases me from having to rely on the limitations of PsiWin, which besides infuriating me with its poor contact synchronisation, also fails to convert my EPOC document files far too often.

Scientists and computing are generally considered to go hand in hand, although many scientists don't seem to consider what their computing requirements *really* are and how they might best be met. Many people I know (not only scientists) automatically assume that a bigger and faster computer *has* to be better, but experience has shown me that the opposite can be true, especially when the portability of a palmtop or sub-notebook such as the Series 7/netBook is taken into consideration.

The Atari connection

Andrew Giddings explains the ins and outs of connecting a Psion palmtop to an Atari ST

Windows PC users are well served when it comes to connecting Psion palmtops to the desktop. PsiWin can not only transfer files but also handle backups, synchronisation and file format conversion (with a few caveats). Users of other desktop computers, especially a minority platform like the Atari ST range (covering the ST(FM), STE, Mega STE, Falcon, Milan and Hades), have more trouble with desktop connectivity. But there is software available, and with a little effort it's possible to do file transfers and backups.

Why bother?

A Psion palmtop is a very powerful machine in its own right, and quite capable of being used independently of any desktop machine at all. But backups can be awkward unless you have lots of spare SSD or CompactFlash disks, and if you have space on your Atari's hard disk it makes sense to use that instead. The Atari can also be useful as a 'library' for Psion-related files that you haven't always got space for, such as etexts, software downloaded from the Internet, sounds, etc.

Hardware

The hardware side of things isn't a problem. The Series 5 range is supplied with a suitable cable and PsiWin (serial) cables for the Series 3 are readily available. These terminate in a standard RS-232 plug that will connect directly to an Atari.

File transfer, the hard way

There are quite a few methods for transferring files between the two machines. The most obvious is to use Psion's built-in 'Comms' application, which can send and receive files using standard XModem and YModem protocols. If you have an Atari program which can also handle one of these protocols (e.g. a general terminal emulator like **Uniterm**, or a specialist file transfer program like **XYZ** or **GSZRZ**), then follow these steps:

1. Start both Comms on the Psion and the relevant Atari program.
2. Select the same port parameters at each end. These include: speed ('Baud rate'), parity, start bits, stop bits and file transfer protocol.

3. To send a file from Psion to Atari, select 'Send file' on the Psion and 'Receive file' on the Atari—or vice versa to send in the other direction.

In practice, setting this up can be tricky. It's better to start off at a slower speed that you know both machines can definitely handle, like 9600 baud, and then increase this only if both computers seem to be coping. Maximum speeds are usually: 9600 for the Psion Series 3, 19200 for the Series 3a and Atari ST/E, 57600 for the Series 3c and 115200 for the Series 3mx/5/5mx/7/netBook/Revo and other Atari models. If your Atari has a serial port modification, you'll need to consult the documentation for maximum port speeds and the correct values to set.

Setting the transfer protocol may also need a spot of trial and error: both XModem and YModem have several subtle variations (128-byte or 1024-byte blocks, checksum or CRC, for example), and you may have to try several combinations to find one that works. Simply persevere until you find the right one.

File names

Another issue is file names. The Series 3 range and all Ataris running TOS (the built-in operating system) use an MS-DOS FAT filing system (with 8.3 format file names, such as 'FILENAM.TXT'), so transfers either way can preserve the file name and attributes. EPOC palmtops use a VFAT filing system with long file names, similar to Windows 95/98. On the Atari side, the MagiC replacement operating system can also use VFAT (though few programs can actually use long file names). So again, transfers between VFAT computers won't lose information. But transfers from VFAT to FAT are likely to result in file names being truncated.

One workaround, if you're backing up your EPOC files to an Atari, is to put them into a Zip archive before transferring them, which will both simplify the transfer process and preserve the long file names within the archive.

A little help

There are specialist software packages to ease the file transfer process:

- **S3 to ST**, by Keith Baines, is for transferring files between a Series 3/3a and an Atari. Everything is controlled from the Atari side, where there's a list of Psion files next to a list of Atari files, allowing you to drag-and-drop between them.
- **ST Link** is by Gary Bainbridge, also for the Series 3 range. Both S3 to ST and ST Link were discussed in more detail in the Atari connection article, back in issue 12 of *Palmtop*.
- **5 Link** is Gary Bainbridge's EPOC version of the above.
- **TranSend** is my own suite of programs. It can transfer between Series 3 or EPOC and Atari, and also handles long file names properly. The Atari programs are driven from the command line, and the Psion ones have the usual file selectors. There's also a backup module. TranSend was written purely for my own personal use though, so may not be of 'production quality'.
- **Print Thru** is a utility by Tim Soos which doesn't transfer files, but lets you print from your Psion directly to a printer connected to your Atari.

The problem with these transfer utilities is that as well as the Atari program, they also need a program to be running on the Psion, which leaves you with the problem of how to transfer that program to the Psion in the first place! This is usually achieved manually with the built-in Comms program, as detailed above.

Conversion

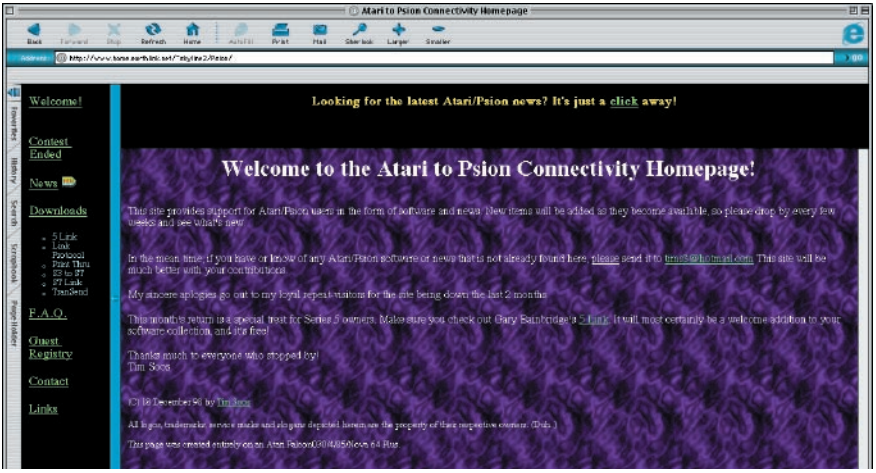
Unfortunately, there is no dedicated software to handle file conversion or synchronisation. However, most important Series 3 files can be transferred in some usable form as plain text for documents, or tab-separated or comma-separated values for data. This may then be loaded into appropriate Atari programs: text editors, word processors, etc. Any advanced formatting will be lost, of course. For EPOC there are only the options of saving Word files as plain text and importing/exporting Data files as delimited text.

EPOC programs such as **MBMView** (reviewed in issue 28) can convert between the Psion-specific formats (Sketch or MBM files) and generic formats such as GIF, JPEG, BMP, etc, which most Atari graphics programs should recognise. If necessary, an Atari program such as **GemView** or **ImageCopy** can convert them into an Atari-specific format.

Similarly, there are programs to convert between Psion-specific and generic sound formats, see page 55 for further details.

Even if some file types just *can't* be transferred, the Atari still makes a very useful backup medium.

To find any of the above software you just need to bookmark Tim Soos' 'Psion to Atari Connectivity' web site at *www.home.earthlink.net/~skyline2/Psion*. This hasn't been updated for over a year, but it does contain all the software mentioned above.



Your one-stop shop, Tim Soos' 'Psion to Atari Connectivity' web page

Win a FREE 4MB flash SSD or 80MB CompactFlash!!

1. *What does WBMP stand for?*

2. *What are Symbian's three current reference designs?*

3. *What helps to keep track of Messier objects?*

Whether you're a Series 3 or EPOC user, you can expand the capacity of your computer by winning either a Psion 4MB flash SSD or 80MB CompactFlash—you choose which prize you want.

Just answer the three questions above and send your answers on a postcard to Palmtop Publications, PO Box 188, Bicester, Oxfordshire OX6 0GP, ENGLAND.

We can only accept entries by postcard, and all postcards must be clearly labelled COMPETITION 29. Any entries received by means other than postcard will be discarded. Please include your prize choice and a contact telephone number on your postcard. Anyone posting multiple entries will be disqualified.

All entries must reach us by 25th July 2000. The decision of Palmtop Publications is final. Last isue's winner was Ian Ford of Heaton Norris, Stockport. *The correct answers were: 1. Digital Audio Broadcast, 2. RealMaps, 3. IBM Microdrive and Series 7/netBook docking station.*

Competition sponsored by Expansys Ltd.
Visit www.expansys.co.uk

Working with Word

In the first part of a new series, we show you how to get the most from EPOC's powerful built-in word processor

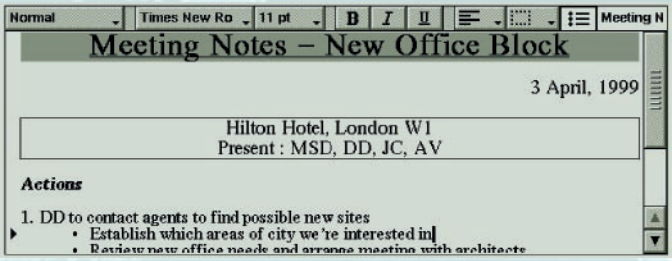
by Steve Clack

Word processors are the most ubiquitous of all computer applications, and every Psion user must have used the built-in word processor at one time or another, even if only to make a few brief notes.

Unlike other palmtop-based word processors, those running on both Series 3 and EPOC models are powerful, full-featured writing tools. Palm OS or Windows CE users must content themselves with a rather basic set of writing tools, often with no support for text styles, advanced formatting, spell checking or even a basic word count facility. If you're planning on doing a lot of serious writing while on the move then the EPOC platform is an obvious choice. Indeed, many users buy EPOC machines purely for word processing.

Any old EPOC

During the coming issues we'll be looking at how to get the most from your EPOC word processor, from composing a simple but properly formatted letter to some more ambitious documents containing embedded tables and graphics. It doesn't matter which EPOC model you're using, from the Revo or Series 5/5mx and compatibles right through to the Series 7 and netBook. As



Smarter than your average palmtop. EPOC's built in word processor has some very powerful features

with most EPOC applications, Word is almost identical between recent machines, and we'll point out any notable differences along the way.

If you're a Series 3 user, rest assured that your own built-in word processor is also very capable. While we won't be looking at any dedicated Series 3 features here, much of the text is relevant, though specific keystrokes and commands will of course be different. For dedicated coverage of Series 3 Word, see our original 'Working with Word' series that ran from issue 6 to issue 11.

Hit the keyboard

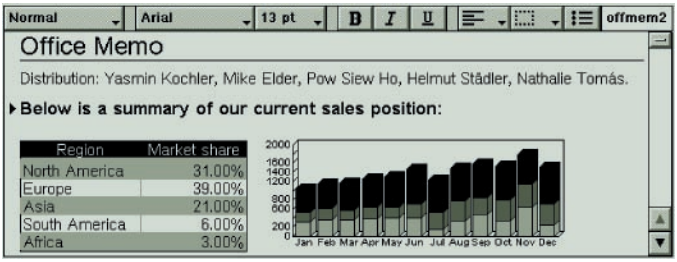
As a general rule, the volume of text you're prepared to enter on your palmtop computer will be tied inexorably to the quality of the keyboard and your own typing skills. The ability to touch type (in other words, to type without looking down at the keys) will be of little help if you use a Revo or Series 5, as their keyboards are really too small for touch typing. The Series 7 and netBook are just large enough though, unless you have particularly big hands. If you *do* own one of these larger machines and plan to do a lot of writing then you can do yourself a big favour by learning to touch type.

Unfortunately there are no EPOC-based typing tutor programs currently available, but for around £20-30 you should be able to find a good desktop computer-based program. After a few weeks of practice you could be typing effortlessly at more than 40 words per minute, and it's simply amazing how much better ideas flow when you can simply enter text without even thinking about the mechanical process behind it.

No desktop required

Although printing directly from your palmtop can sometimes give unexpected results, with certain typefaces and styles not printing out correctly, EPOC Word has

For large amounts of word processing, the Series 7/netBook's keyboard is excellent



Embedded tables and charts—all easy with EPOC Word

enough sophistication to create very professional results without the need to further 'polish' your documents in a desktop word processor. It's quite feasible to construct a sophisticated business report, complete with bulleted or numbered lists, bordered boxouts, embedded tables, graphs and other graphics.

If your own word processing needs are more modest, you can quickly set up a reusable 'template' for letters, memos, fax cover sheets, etc. These can then be called up at any time, forming the 'skeleton' of several commonly-used documents. Although the original ER3 (Series 5 'Classic') machines lacked this 'template' facility, during the course of this series we'll show you a simple way around this limitation.

If you have the 'Classic' then you'll also be missing the useful outlining feature that was added to later EPOC releases. Outlining, present in almost all desktop word processors, allows you to create a structured list of ideas with several levels of sub-ideas indented beneath the main headings. If you're new to outlining then you can familiarise yourself with the technique by reading 'Making an outline' in issue 16 of *Palmtop*. Although the article discusses the feature from a Series 3 perspective, the basic concepts are the same for EPOC.

Taking it to the limit

Powerful as it is, EPOC Word doesn't have quite *all* the features of the best desktop word processors, and it's important to know just how far you can go with it.

Perhaps the most common question asked by ambitious EPOC wordsmiths is whether it's possible to create documents with more than one column of text per page. Although it *is* possible by some very convoluted formatting or the embedding of Sheet objects, it's really not satisfactory for multiple page documents. If you absolutely need multi-column (newspaper style) page layouts then you ought to be using a desktop or laptop word processor.

Likewise, if you plan to create technical documents that make use of footnotes (small references placed at the bottom of some or all pages) then you'll find this tricky on a Psion. Don't confuse 'footnotes' with 'headers and footers' though. Headers and footers are simply standard elements that appear at the top or bottom of each page in a document, such as headings or page numbers (which can be automatically generated), and include such details as the date and other details about the document. EPOC Word handles headers and footers quite deftly.

Sick spell checker

Perhaps the biggest idiosyncrasy of the EPOC word processor is the built-in 'Spell check' facility. Although it works correctly the performance is *horribly* slow, often taking a few minutes to check through even a short document. The latest EPOC machines alleviate the problem a little by virtue of their faster processors, but it's still a painful process. Sadly there's no workaround for this, though it's hoped that Psion will optimise the program code at some point in the future.

Despite the extra time taken, it's a good idea to get into the habit of spell checking any documents that you'll be sending on to other people, particularly if they're business-related. It's also worthwhile giving your prose a second read through before sending it off. No matter how much time you invest in formatting your document to make it look polished, it's all in vain if the actual content is either poorly written or peppered with careless spelling mistakes.

Even if you consider yourself a good speller, the spell checker will pick up other errors such as doubled-up words (e.g. 'the the'), that are otherwise easy to miss.

Ransom notes

A common mistake when armed with a decent word processor is to 'overdo' the formatting. Don't think that just because you have access to a mass of typefaces and point sizes, you have to use as many of them as possible! As a general rule, don't use more than two different type styles on a page (excluding headings), and don't mix typefaces unless you feel it's necessary to make things clearer. Documents that combine lots of styles and font sizes can rapidly end up looking more like a kidnapper's ransom note than a professionally produced document, so be cautious.

Finally, always resist the urge to use 'scripted' typefaces (*such as this*), even for personal letters. They may appear novel at first, and perhaps give your correspondence some of the 'charm' of a handwritten letter, but this kind of text becomes horribly difficult to read after the first paragraph or two, and drives most readers insane.

Speeding the process

No matter what kind of documents you produce, there are bound to be several words, phrases or whole blocks of text that you use on a regular basis. Although there is no direct support for 'Autotext' or 'Glossary' text within EPOC Word itself, there are numerous utility programs that will automatically insert words or phrases into your documents with a couple of keystrokes. We'll be covering these in a complementary feature article in the next issue of *Palmtop*.

Armed with a better idea of what the Psion word processor can and can't do, together with a few basic ground rules of word processing, in the next issue we'll get down to the nitty gritty of creating a properly formatted letter. We'll then show you how to save the basic formatting of this letter for re-use over and over again.

A brief introduction to WAP

Steve Mann takes a look at what WAP is, how it works, and why it's going to be so important for EPOC users

Unless you've been living in a cave for the past year, you've probably heard of WAP, the Wireless Application Protocol. WAP is a collection of technologies for delivering content from Internet-based servers to wireless consumer devices. These technologies include:

- A microbrowser - a scaled down version of a typical web browser, that runs on a WAP-compatible palmtop or phone.
- A programming language called WML (Wireless Markup Language) for building applications that run on the micro-browser.
- A set of communications protocols for passing messages between WAP devices and WAP-compatible Internet sites.
- An architecture for a special kind of WAP-specific Internet server called a WAP Gateway.

WAP is promoted by the WAP Forum (*www.wapforum.org*), an organization founded in 1997 by Motorola, Ericsson, Nokia and Unwired Planet (now known as Phone.com). It now has over 200 members, including most of the world's major communications, telephone, hardware and software companies. WAP is defined by an extensive and detailed set of technical specifications that you can download from the WAP Forum web site. It is a global standard designed to work on popular wireless data networks.

WAP devices

The WAP Forum designed WAP for use with wireless consumer devices, particularly cellular mobile telephones. There are certain characteristics of this type of device that they addressed:

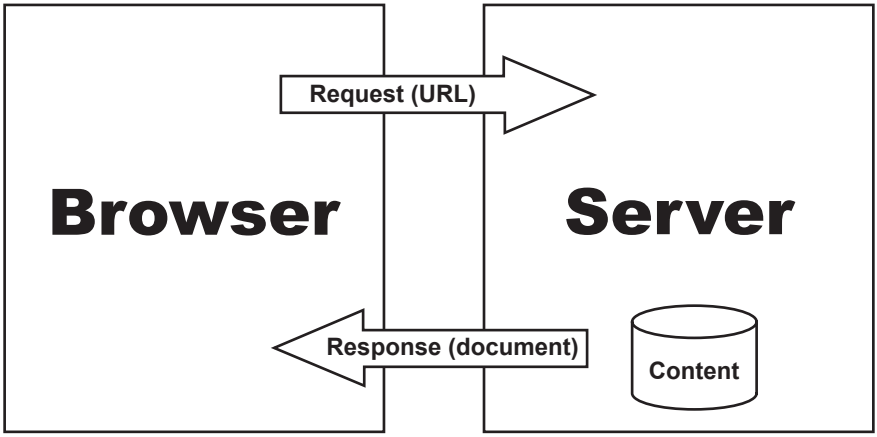
- Firstly, wireless devices typically have slow data communications capabilities. When you use a standard (wired) modem, your typical connection speed can be up to approximately 56kbps (thousands of bits per second). Wireless modems, like those found in digital telephones, typically run at 9.6kbps. To compensate for these slower speeds, WAP's designers designated that all communications between devices and servers should be compressed.

- Wireless communications networks are notoriously unreliable. Just like mobile telephone connections, static and dropped calls are commonplace. WAP applications are designed as a series of brief messages that are largely immune to this type of interference. In addition, the WAP protocols have built-in error detection and correction features designed to speed error recovery with poor connections.
- Finally, most wireless consumer devices are not well designed for retrieving and viewing data from Internet servers. Although there are a few exceptions, such as palmtop devices, most have very small screens and minimal user input capabilities (primarily limited to the telephone keypad). To compensate for these hardware shortcomings, WAP programs are designed to minimise data entry and to limit user interaction to a small number of menu choices.

How WAP works

The easiest way to describe how WAP actually works is to compare it to a typical desktop web browser. When you sit down to use Internet Explorer, for instance, you typically enter a URL (basically a web address) which specifies the name of a document somewhere on the Internet. When you hit the Enter key, the browser goes out on the Internet and looks for that document. If successful it retrieves the contents, including any linked images and other objects, and displays them on your screen. The process is depicted in the diagram at the bottom of this page.

When a WAP microbrowser requests a document, the request is sent over a wireless network to a special kind of server called a WAP Gateway. The Gateway then translates the WAP communications protocols from their WAP format to the format used by the Internet. The Gateway the sends the request out on the Internet. If the document is found, it is retrieved by



HTTP over the World Wide Web

the Gateway, which translates it into the compressed WAP format and sends it back to the WAP device for display. This process is show in the diagram below.

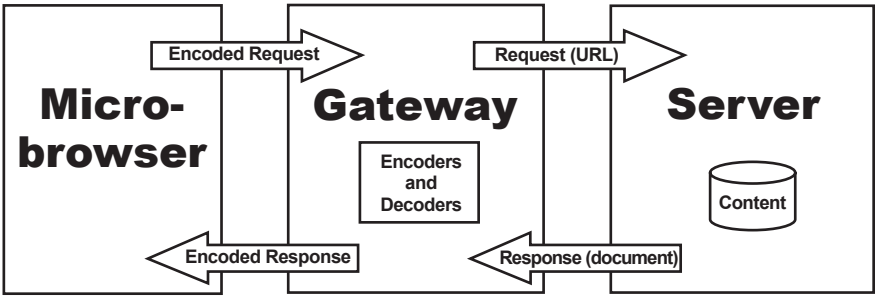
All communications between a WAP device and the Internet go through a WAP Gateway. In addition to decoding WAP messages into Internet-compatible messages and vice versa, WAP Gateways provide other crucial services such as security, foreign character set translation, customer profile maintenance and even language translation. The more sophisticated WAP Gateways from companies such as Phone.com and Nokia can even 'push' messages to WAP devices, much like paging and SMS messaging.

WAP applications

There are hundreds of WAP applications currently available, ranging from stock news, weather and sports, to sophisticated financial services and location-based information like cinema schedules and restaurant locations. All you need to access them is a WAP-compatible handheld device and an appropriate service. (You can also download WAP browsers that run on desktop systems with standard Internet connections. See 'Resources' at the end of this article for some pointers).

Although WAP applications retrieve content from Internet sites, users used to a colourful multimedia experience will be disappointed. The content is mostly text-based, although there are a smattering of logos and images in the form of black-and-white WBMP (Wireless BitMaP) files. This minimalist approach has been used to overcome speed issues and the lack of processor power found in today's mobile phone handsets. As newer hardware and different screen sizes begin to appear, things may change. As WAP browsers become incorporated into more powerful devices (such as EPOC palmtops) we can expect to see more interaction and a wider range of services.

A WAP application on a cellular telephone screen is very different from a typical web browsing experience. For some, it can be annoying and frustrating—data entry can be particularly exasperating. To enter the character 'F' for instance, on most cellular telephones you have to press the '3' button four times, to cycle through the characters '3', 'D', 'E' and 'F'. Entering a single word in this way can take several seconds.



HTTP over a WAP connection

A simulation of how the TomTom WAP service will look running on an EPOC Microbrowser

WAP on EPOC devices

Although WAP was designed for cellular telephones, the WAP Forum members knew that their work would also be appropriate for devices such as handheld computers with wireless (or wired) modems. In fact, since handheld computers typically have larger screens and much better data-entry capabilities, they are, in some ways, much more suitable for WAP applications.

The first EPOC browser appeared last year, bundled with the Ericsson MC218. Due to limitations imposed by Ericsson the browser won't run on any other EPOC device, leaving Psion owners waiting.

In March this year, Psion Computers announced that a full-featured browser was being developed in association with Purple Software and leading mobile Internet technology company Dynamical Systems Research (DSR). The press release quoted Psion as saying "We want to provide the customer with as much choice as possible. Because Psion products have a larger screen area and better user interface than WAP mobile phones, we believe that we can deliver a richer experience to the customer. This is of tremendous benefit to corporate customers who are currently developing WAP applications for their mobile workers, but need a more capable mobile device for accessing their information."

According to Psion, the new browser is due for release imminently, and we hope to review this in the next issue of *Palmtop*.

The status of WAP

WAP is currently being deployed by most major communications carriers around the world. Most of these projects are in the early, prototyping stages. They range from the typical news, weather and sports information services to sophisticated enterprise applications that serve special corporate needs. Major carriers in several countries offer a standard package of basic services for a modest fee, and a host of free WAP Gateways are beginning to appear.

WAP hardware is becoming more common. By the end of this year there should be several WAP-compatible mobile phone models available for each major wireless network in all larger countries. Some analysts estimate that by 2002, 85% of all mobile phones will be WAP-compatible.

Within two to three years, you will probably be using a WAP-based service with a mobile phone or a wirelessly-equipped handheld computer. You might also be using WAP on a desktop computer with a modem or network-based Internet connection. If all goes well, it will just be another Internet service. WAP, like most successful technologies, should ultimately be transparent.

WAP resources

Desktop WAP Browsers - There are currently two Windows-compatible WAP browsers that you can download. This is a quick-and-easy way to get some first hand WAP experience.

WAPMan, from The Edge Consultants, www.wap.com.sg .

WinWAP, from Slob-Trot, www.slobtrot.com .

Software Development Kits (SDKs) - Phone.com, Nokia and Ericsson all offer free SDKs, including documentation and desktop WAP browsers that you can use to access WAP sites on the Internet.

www.phone.com
www.nokia.com/wap
www.ericsson.com/wap

WAP search engines - These four sites have both traditional search engines that build their lists by scouring the Internet for WAP sites, and directories to which people can submit URLs. You can access the first two sites using a web browser or a WAP microbrowser. The last two can only be used with a desktop web browser.

www.fast.no , www.wapaw.com
www.gelon.net , www.waply.com

WAP content - Here are some good sites to try out:

Yahoo! Two versions of Yahoo's world famous service are available for WAP. The first is for the UK and Ireland, the second for Germany.

wap.yahoo.co.uk , wap.yahoo.de

Excite: Not to be outdone by its competitor, Excite offers WAP services with the standard news, weather, entertainment, sports and financial information.

www.excite.co.uk/wap

BBC News: One of the world's most respected news providers has a WAP service. Read news, sports, weather, television listings, sci-tech data and travel information wirelessly.

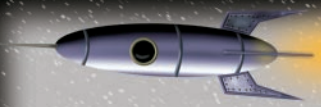
www.bbc.co.uk/mobile/mainmenu.wml

To find out more information about WAP, and how to create your own WAP site, go to The Independent WAP FAQ at

wap.colorline.no/wap-faq

Specifications - If you're interested in the gory technical details, visit the WAP Forum and download the specifications.

www.wapforum.org



Hot tips for hot games

In the first of a new series, we invite a game author to share some winning tips and strategies

Team Psion, by Steve Litchfield

Be prepared to put in some mental spadework while playing Team Psion. As with adventure games, keeping a paper notebook (or an open Word file) on hand is absolutely vital.

☑ As in the real motor racing world, it takes a little time to work out the ideal car settings for each track. It's unlikely that you'll find the perfect setup for each immediately, with only six 'hot laps' per driver (three each in practice and qualifying) and random effects such as weather and other cars getting in the way. But by using common sense, a little knowledge of the sport plus trial and error, you should have a reasonably good car setup by the end of each session. Team Psion should remember your settings for each track from season to season, but it's an excellent idea to mark them in as well in your notebook. And if you're determined to cheat, we've published the 'perfect' settings for the first five tracks below, to get you off to as good a start as possible. Jot down which tyre strategy you used as well, with comments on whether you think it was effective.

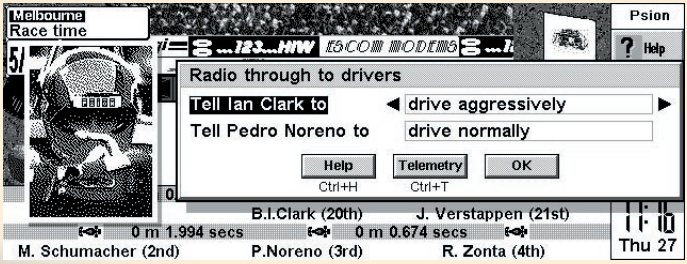
☑ Pay close attention to both the circuit analysis for each track and the comments your drivers make—there are *big* car setup clues included. It will help you interpret them if you actually follow the sport on TV and have a feel for the variables a Formula One circuit can throw up.

☑ Put as much money as you can into development without running the risk of going bankrupt. More development means a better and faster car. Don't put too much money into entertaining the sponsors. If your race results are good enough, they can do without the champagne lunches!

☑ When you start to see rain 'falling lightly', don't panic and dive into the pits straight away. Slick tyres will work quite happily in these conditions. Even when rain is 'falling steadily', try to build a stop for Intermediate tyres into your strategy, so that you don't lose too much time. It's important not to have the wrong tyres on for too long though, as your lap times will

Team Psion?

Team Psion is a Formula One motor racing simulation game, included as part of Psion's Games Arcade pack, as reviewed in issue 15 of *Palmtop*. It is available from major Psion dealers at £29.99 including VAT.



Communicate with your driver—it's good to talk!

be *significantly* reduced. And remember that there's always a very good chance the rain will stop just as suddenly as it started. Weather effects are truly random in the game, but there's a built-in weighting towards rain in certain countries (including the UK).

☑ It's vital to get the most from your cars by making sure your drivers work to instructions. For example, straight out of the pits, there's no point in him flinging the car around and pushing hard, as it will only wear the tyres out quickly and raise the engine temperature critically. As a pit stop approaches though, you *can* instruct him to push harder, reaping the benefits of a few quicker laps while knowing that the car's about to be sorted out imminently anyway. And on circuits with low tyre wear you might want to instruct a driver to 'drive aggressively' more of the time (while watching the telemetry for temperature problems, of course).

☑ When stuck behind a driver that you suspect is slower, it's useful to tell your driver to 'push hard' for a lap or so. Of course, this involves a small element of crash risk, tyre wear and engine punishment, but should be enough to overtake.

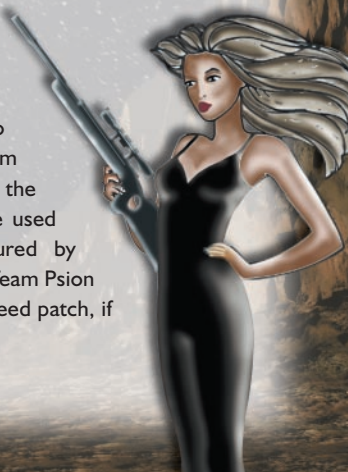
☑ If you do badly in a race (and it's still in progress), you can cheat by starting over again. Just close the game with [Ctrl]+[E] and restart from the Extras bar.

☑ If you're using a Series 5mx or equivalent, make sure you get the game patch at *3lib.ukonline.co.uk/arcadesc.htm* , which will ensure Team Psion doesn't run too quickly on your faster processor. While you're there, you'll may want to grab speed patches for Golf and Bomz5 too.

☑ A small number of people have reported an EPOC system error 'OPL Frame / 135' when the game is run—this is normally due to another program tampering with the system OPX file used and can be cured by reinstalling the Team Psion game (and its speed patch, if needed).

Car setup crib sheet for the first 5 circuits in Team Psion

Melbourne	6	5	5	5	7	4
Interlagos	3	4	4	5	7	5
Buenos Aires	7	7	5	6	6	4
Imola	4	5	5	5	8	4
Monaco	8	9	4	6	6	4



On the NET

Our regular look at what's happening online, and where to point your browser

by Pete Sipple

It seems that every few weeks another EPOC site leaps onto the scene. Some use the traditional format of news, software and links, some selling software, and others offering tips and support for the different flavours of EPOC machine. Here are some of the fresher sites to have caught my eye this time around...

EpocCity

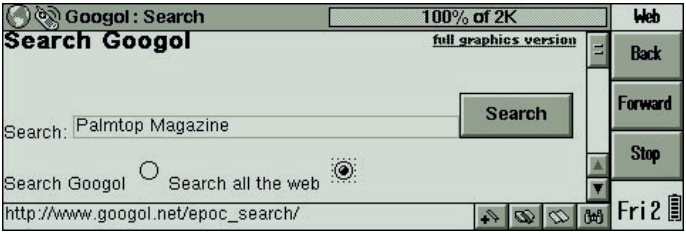
EpocCity is promising a mix of news, articles, guides, downloads, contests and more. Prior to the full launch sometime in June, their Forum is already up-and-running, and it seems to be pulling a crowd. Fully searchable, with common topics appearing in the Frequently-Asked-Questions area, there's a Tech Forum, Marketplace, Bargain Corner, Developers' area, as well as a Tea Break and Suggestion Box. The site remembers when you last visited and highlights new messages when you next connect. This worldwide meeting place is certainly one to watch. *www.epoccity.com* .

Gander at Googol

Every time I take a look at the **Googol** site there seems to be something new to see. They still offer their excellent EPOC-only search engine, shareware listing and news service, and within the last few weeks they've launched a new extension to their site, a Revo-specific area. This includes a mailing list, software and hardware news and FAQs, and best of all, a search engine optimised for use with Web running on a Revo. It looks a little bland on a full-sized

	Forum	Posts
Public Forum		
	Tech Forum Problem with hardware or software? Share some tech news or tips with others. Post it here.	457
	Marketplace Sell or buy your EPOC related stuff here!	44
	Bargain Corner Found a good bargain in town or on-line? Share with us.	33

A new arrival—EpocCity



Googol, thoughtfully optimised for browsing on the Revo

browser, but if you're online with a Revo then don't miss *www.googol.net* .

Ostracised Osaris

The Oregon Scientific Osaris, first reviewed back in issue 24, is the member of the EPOC family most commonly overlooked. Its unusual design and small screen size appear to have hindered the popularity of this powerful little machine. While most EPOC-related sites contain much information relevant to Osaris users, **Osaris Online** seems to be the major repository for news, links, information and details of software compatibility. Other features include a forum, hints for developers and a spotlight on Purple Software's latest Osaris-compatible software. With a little more input from other users, the addition of more content will make this visually appealing site an excellent resource. *osaris.virtualave.net* .

Baaa-rmy!

Psion software Paclamb, Sheep Tetris, Sheep-o-meter, BigSheep and many more are the work of poet programmer Graham Parks. It's a surreal, mint sauce-free site with a distinctly fluffy theme. If you want to know more (or even why) then trot on over to *www.cambrian.ndirect.co.uk/sheep* .

Hints & Tips

Every item published in this section wins the author TWO free issues added to their subscription!

netBook recovery

If you're using a CompactFlash disk in your netBook to store files and applications, it's worth making room for the ROM image file 'OS.img'. This file is supplied with the netBook on a master CF disk (and also downloadable from the Psion Enterprise web site). In the event of a system crash and hard reset while on the road, this ensures that the netBook will automatically cold boot again without you having to track down your master disk.

Paul Ockley, London

Deleting all trace

Having installed PsiWin on my spouse's PC while mine was being repaired and then trying to delete it again afterwards, I found that the 'My Psion' desktop icon refused to go away. I know it's just a cosmetic thing, but it niggled both of us sufficiently that I went out and found a solution in the utility 'Tweak UI'.

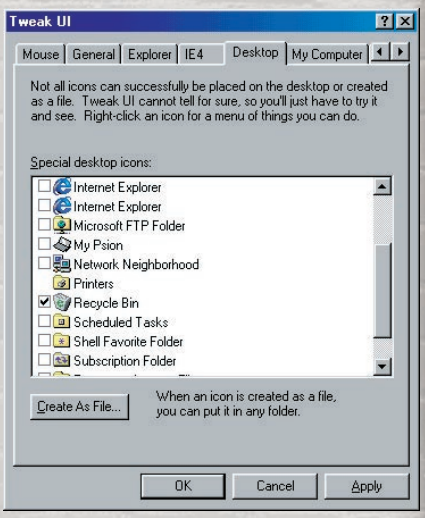
This is included on the Windows 98 CD (and I suspect also on the Microsoft web site) in \tools\reskit\powertoy. Right-click on the '.inf' file and choose 'Install'. To run Tweak UI, you'll find its icon within the standard Windows Control Panel. Choose the 'Desktop' tab and you'll see the option to show or hide a multitude of icons, thankfully including 'My Psion'.

Claire Short, Oxford

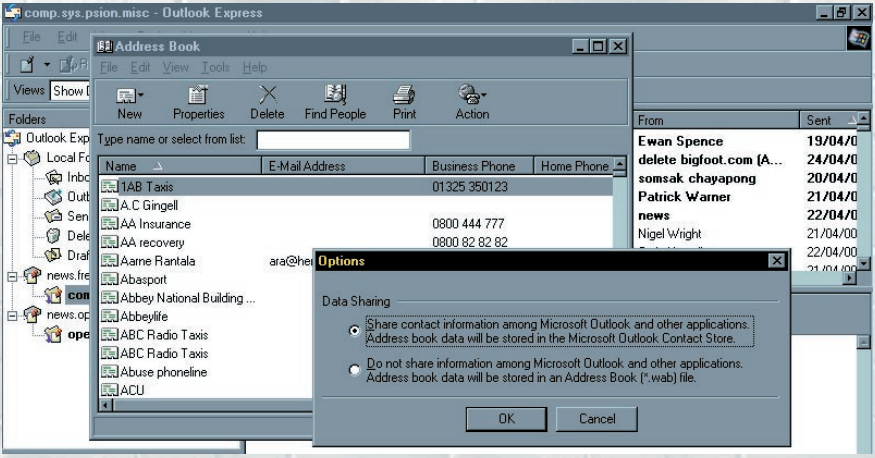
Contacting Outlook Express

Since I upgraded to a Revo a few months ago, I've been searching for a way to synchronize Outlook Express (the free email program that comes with Internet Explorer and which uses the standard Windows Address Book) and the Revo's Contacts.

I've also got a copy of Outlook, Microsoft's main desktop PIM (which the Revo *will* synchronize with), but I don't care to use its bloated features when all I need is a simple email client. However, after installing Outlook 2000 (which comes with Outlook Express 5), I discovered that under Outlook Express Address Book's 'Tools | Options' there's an option to let



Removing 'My Psion'



Synchronizing Contacts with Outlook Express, courtesy of Outlook

it share Outlook's contact data. I ticked it, restarted Outlook Express and my existing Outlook contacts appeared. I then connected up my Revo and synchronized. My latest contacts came over perfectly through Outlook and into Outlook Express. The only flaw in this system is that you have to have Outlook installed, but at least you don't have to use it!

Richard Gaywood, via the Internet

Silence is golden

I was reading the letter in Q&A in issue 27 about single ringing alarms and the search for something unobtrusive, and have a suggestion that is at least a partial solution. Although you can't stop EPOC from sounding these repeating alarms, I've recorded a quiet hand-clap and set it to sound once as my default alarm. Because it is so quiet and brief I have to be careful when I use it and not to expect it to summon me from across the house. But in a business meeting, it sounds like a spurious clicking noise to the untrained ear and is quickly dismissed. Having become attuned to it, I can respond when discreet to do so.

Anthony Ford-Jones, Burlington, Ontario, CANADA

Lean and mean

Having experienced several dropped connections while sending email with Psion's new 56k Travel Modem, I decided that perhaps it was my Series 5mx at fault. After clearing out over 200 old messages from my message store and moving it from CF back into my Internal disk, I've had far more reliable results. I realise this isn't a definitive solution for all Travel Modem woes, but it worked well for me.

David J Evans, Swansea

Keeping your messages on C

Owning up

Losing your palmtop computer is of course your worst nightmare. You'll probably know already that by setting the 'Control Panel | Password' to display owner information 'At switch on', you increase the chances of having it returned should it be found. But having to clear this owner screen a dozen times a day can be tedious, especially if you spend most of your time in a low-risk environment where such measures are largely unnecessary.

One of the first things the (honest) finder of your palmtop is going to do is check the Contacts or Data address book for clues. Pressing a clearly marked silk-screen button is far more obvious than browsing the System screen menu and happening to chance upon 'Information | Owner'. It therefore makes sense to enter your own contact details as the very first entry, perhaps with suitable fonts, highlighting and text appropriate to a lost and found situation. To make sure this entry is the very first one the finder sees, you may have to both start it with a 'low' ASCII character such as a leading space and set your Sort options accordingly.

Ian Hamilton, Livingston, Scotland

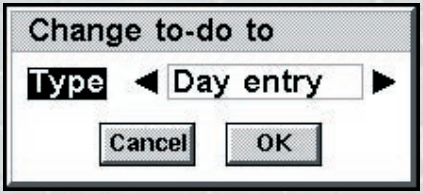
Changing type

One of the less-well known features of EPOC's Agenda is that you can change the type of entries as much as you like without losing information, e.g. To-do items can be changed to Day entries if they need to assume a physical presence and duration.

A good example of this is concerning my car. As I notice problems I log them in an attached note on a low priority To-do item. If something serious then breaks, I change the entry to a high priority To-do with amended text, such as 'Phone car dealer'. Once booked in at the dealer, I amend the main entry text again, this time to 'Car in for repair' and use 'Entry | Change type' to convert it to a 'Day entry'. Switching to the Day view then lets me adjust the entry's date and time, together with an appropriate alarm. And so on.

The beauty of this flexibility in Agenda is that entry text and attached notes get preserved throughout, so for example I can have a list of car problems conveniently to hand when I arrive at the dealer.

Stephen Murgan, Louisville, Kentucky, USA



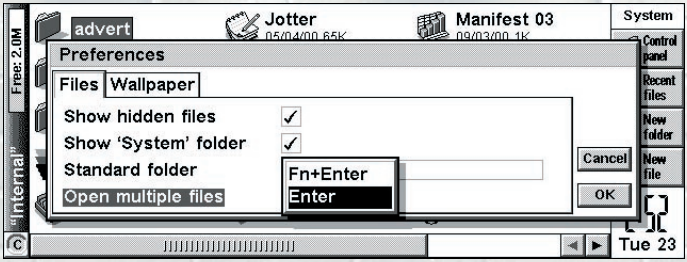
Agenda - your flexible friend

Background backup

When backing up your EPOC palmtop using PsiWin, it's usual to have to wait a few minutes for the process to complete. In the foreground on your PC screen will be a dialog box displaying a progress bar which gradually fills in. Although wandering off to fix yourself a drink is a good idea too, by using [Alt]+[Tab] you can switch to any other program and continue working while Psion Backup chugs away in the background. Rest assured, you'll still get the 'Backup completed' dialog pop up and will know when it's safe to disconnect the palmtop.

Roger Battershall, Ealing, London

A change that could revolutionise how you use your palmtop...



File juggling

Some of you may not be aware that it's easy to have several document files of any type open at the same time. For example, keeping two Data database files open and switching between them with one tap. Or several business spreadsheets, cycling between them with a tap of the Sheet program icon. This can be a huge time saver, especially when your document files are in different folders and you'd otherwise have to hop around your System screen a lot.

By default, the System screen only lets you open up one file at a time per application, i.e. if you select a Sheet document, any open Sheet file will be saved and closed, then the new one opened. But go to the System screen and use the 'Preferences' command on the 'Tools' menu and change 'Open multiple files' from 'Fn+Enter' to 'Enter', and tap 'OK'. Your Psion will then allow you to open further documents at the same time as any that are already open.

By using the 'List open files' command (or tapping on the top panel of the toolbar) you can see all loaded document files at any time. If you start running short of memory, it's well worth scanning down this list to identify documents that are finished with and can be closed again.

Ozzie Hall-Osman, Gravesend, Kent

Selecting multiple files

Along similar lines to Ozzie's tip above, there's another often-forgotten feature of the System screen which can significantly speed up the way you manage your files. In a way which mimics how Windows Explorer works on the desktop, groups of files can be selected using [Shift] and [Ctrl] in conjunction with a stylus tap.

For example, to select a group of contiguous files (i.e. those next to each other vertically in the System screen list), tap on the first to highlight it and then hold down [Shift] and tap on the last one required. To select files which aren't listed together, hold down [Ctrl] and tap away merrily—all files tapped on will be highlighted individually.

When copying, moving, beaming or deleting files, these two techniques can save a lot of time and turn the System screen into a respectable file manager.

Steve Litchfield, Sub-Editor

Selecting a group of three files with [Ctrl]+tap

Q&A

Get your Psion and EPOC-related questions answered by our editorial panel...

Battery worries

Q I own a Series 5 and recently had the screen repaired by Psion because it was no longer responding to screen taps. Since having it returned, I have noticed a drastic reduction in battery life. Before my screen failed, I was enjoying an average lifespan of 21 hours. Since Psion have carried out their repair, I have used up three sets of batteries, averaging only 13½ hours each! I always use the same brand of batteries (Duracell Ultra) and rarely, if ever, make use of the backlight. What's going on?

Sunny Ng, London

A **Although there may indeed be a problem with your replacement unit (in which case you should contact Psion again as soon as possible), your figure of 13½ hours may actually be genuine under certain circumstances. You don't mention in your question, but perhaps you use your Series 5 less than you used to? Many people get caught out by the fact that the Series 5's battery usage figures don't allow for time spent switched off, during which period there's still a couple of milliamps of electrical current being drawn from the main batteries, just to keep the memory alive and the clock ticking over. Thus, if your original 21 hours was measured over a week and your subsequent sets each lasted two weeks of real time, the new figures are quite consistent.**

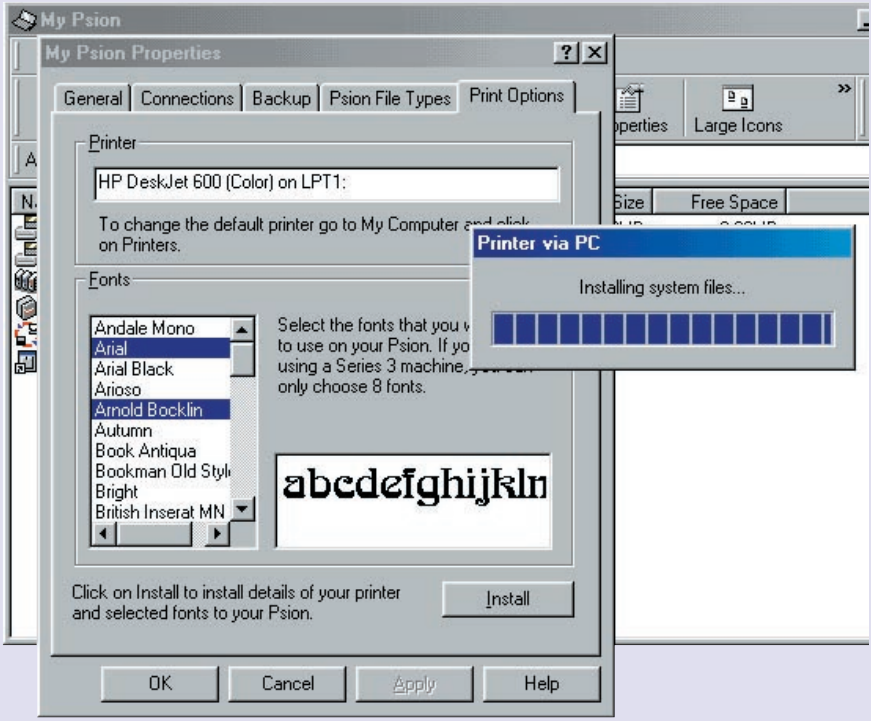
See also our 'Battery breakdown' feature in issue 23 for more information on the wide world of batteries.

Printing woes

Q I have had a Psion Series 5 for two years now and I rely on it daily for email, fax and report-writing. I've experienced one fault with it ever since purchase however: whenever I 'Print via PC' it inserts spaces in the middle of words when I use '12 point' text and places letters on top of others in the same word when I use '10 point'. Do I have to put up with this behaviour?

Mark Hunter-Purvis, Blaydon-on-Tyne, Tyne & Wear

A **You shouldn't have to. Most EPOC users find printing via PC to be very reliable—it's usually only local printing that causes problems. It sounds as though something's got horribly out of step between the PC's Windows printer settings and those stored on your Psion. To repair the damage, we'd suggest you try the following:**



Re-installing 'Print via PC' font settings

1. **Delete\system\printers\WinPrint.pdr from your Psion's internal 'C' disk.**
2. **Go into PsiWin's 'Properties' dialog and select the 'Print options' tab.**
3. **Check the correct default printer is shown in the 'Printer' box.**
4. **Select all the required fonts.**
5. **Click on 'Install' to copy a new WinPrint.pdr file onto the Psion, complete with up-to-date information about your printer and required fonts.**

Adaptor required

Q Is it possible to print directly from the Revo to a parallel printer? I have a 9-pin adaptor which I attached to the serial cable from the Revo docking cradle and then attached a printer cable. I then set 'Control panel | Printer' to point to the correct model and set 'Print via' to 'Parallel', but to no avail.

Mark Jones, Nottingham

A **You'll find this almost impossible. The signals sent down the wire from the Revo are 'serial' and therefore not compatible with a printer's parallel interface.**

Serial-to-parallel convertors are available for some Psion machines. For example, the optional printer cable for the Series 3c and Series 5/5mx models, which relies on a battery-operated module integrated into the printer connector. There is no specific convertor available for the Revo, but it may be possible to use a generic conversion unit and a standard null modem adaptor.

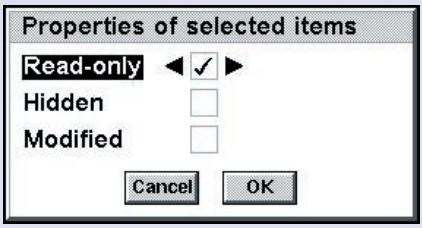
Far easier is to use the Revo's infrared port. Even if your printer doesn't have a suitable port, it's easy to upgrade it via one of the many infrared 'eye' accessories available.

Read only

Q I've transferred some of the sound files from the *Palmtop* CD onto my Series 5 for use as alarms but would now like to delete some of them. However, the Series 5 won't let me do this as it says they are 'read-only' files. Is there any way to delete these sounds?

Emily Robinson, Worsley, Manchester

A **This minor obstacle is a common stumbling block, and not just for sound files. The problem arises because when Microsoft Windows copies files from a CD it mimics the 'read-only' nature of the CD medium by setting the 'read-only' flag on each file, even though they now reside on a disk which can be written to. This is obviously illogical behaviour and all Microsoft's fault, but there's nothing we can do about it. To deal with such files, simply select them (either singly or in blocks) on the System screen on the Series 5 (or in Windows Explorer on the desktop) and use 'File | Properties…' to uncheck the box marked 'Read-only'. They can then be deleted in the usual way.**



Removing the 'Read-only' flag

Connection problems

Q I use both a Series 3mx and a Series 5mx, but have constant problems getting them both to talk to my PC (not at the same time). An initial connection to either will usually work perfectly, but after removing the cable from one palmtop and plugging into the other things frequently go wrong, with PsiWin's 'squiggly line' remaining disappointingly flat. Sometimes restarting the PsiWin connection server and/or turning the Remote link on the palmtop off and on will do the trick, but at other times a complete reboot of the PC is needed. Is it just me?

Disappointingly flat?

Fred Pellard, Toulouse, FRANCE

A **No, you're not alone. We've heard many instances of people having connection problems with PsiWin 2.x. Although Psion's aim of integrating EPOC into Windows is ambitious and laudable, there can be no doubting that it's by no**

means perfect. The situation's aggravated by the complexity of Windows and the fact that no two PCs are exactly the same (software and hardware). It's interesting to note that Palm OS's main connection server is completely isolated from Windows Explorer and runs in a world of its own—and has a reputation for extreme reliability. And for those who care to cast their minds back four years, so did PsiWin 1.x, which similarly did its own thing. Sometimes it pays to keep things simple.

UK
IC24, including 0800 weekend number, Online Signup
Freeserve Script Version 2 - Fully working (CLI issues)(28.8k+)
UK Fantastic Tested fine. Very quick - sometime if feel it's a little too quick to grab and send your mails Website for Online signup (28.8k+)
Demon pru available from here with new access numbers (developed from Peter Barton - all RObMPS work except for Green (odd protocol)
TescoNet Tested successfully (21st April 1999, Thanks to Lee Stone)
Computerserve, Retrieved from Psion
Global Net UK (Tested successful thanks to Steve Gallner)
Yahoo On-line (web based email) This is just connection to the web, no mail service -- Username is yahoo to log in, no password needed
Virgin Net
UK Online Now swapped to free service, on line sign up to!
Telinco Online signup (28.8k+)
Go Free - another free ISP (28.8k+)
U-NET
Connect Free - Finally! (28.8k+)
Claranet - Updated 28th Oct 99
Pipex Dial
NetCom UK
Fairnet

A selection of ready-made PsiMail Internet settings

3a too old?

Q I have recently tried accessing the Internet with my Series 3a and PsiMail Internet (PMI). I've successfully signed up to some free ISPs using my desktop computer, but each attempt to connect with my Psion meets with failure. Even at £1 a minute the Psion technical help line was not useful. They simply told me that the Internet had moved on since PMI was developed and that it could no longer be used. The man at TescoNet had never heard of Psion and had to put me on hold, at 50p a minute. Meanwhile at VirginNet I was asked "Scripts? What are they?" and again I was put on hold.

So my wallet is lighter but I am no nearer to logging on. The evidence on the 'net is that many people *do* log on with their Psion. The question is, how?

Matt Ruglys, Lostwithiel, Cornwall

A **The Psion help line is wrong, PsiMail Internet *is* compatible with a large number of ISPs, though not all. To get up and running though, you'll need (as you've no doubt discovered) to become fairly expert at unscrambling the jargon of the communications world. As a start, make sure you read our four-part series on connecting your palmtop to the Internet, which ran from issues 17 to 20. Your next step, for a given ISP, is to find out their 'magic' DNS numbers (their support line should have these to hand) and to establish what responses you need to insert into PMI's connection script. The latter can usually be worked out by dialling into their access number using Comms (typing "ATDT0845nnnnnnn[Enter]" is usually enough to get you online) and watching the prompts that appear. Careful editing of the script will then supply the right combination of username(s) and passwords needed for that ISP.**

If the above seems too technical, note that there are several web sites which specialise in providing 'ready to roll' PMI settings files. Start your online search at *freespace.virgin.net/ro.cutler* .

Musings...

Debbie Barham takes an uncannily insightful look at 'A Psion of things to come'

Ten years ago, if you'd suggested that a computer no bigger than a Kelloggs Individual Variety Coco Pops packet could be surfing the net with—look, ma!—no wires, you would have been laughed out of town. "Mad, completely mad…", the nurses would sigh ruefully, confiscating your green-screened Psion Organiser II and replacing it with a nice wax crayon of similar hue.

But PDAs have come a long way in the past decade. And now it's crunch time for the clamshell. With more platforms than a Spice Girl's wardrobe, we've reached a crossroads—sooner or later, the jostling crowd of rival operating systems (EPOC, Palm OS, Pocket PC, etc.) will have to evolve towards a more universal standard. To make things even more confusing, Ol' Bluetooth is back, poised to bite through all those clumsy cables and render the mobile office *truly* mobile. The PDA is mutating with a speed that puts even the most rampant of genetically modified salmon to shame. So where will it be, in another ten years' time? Scrolling forward to 2010, we checked out those crucial Agenda entries along the way...

June 2000

Desperate to consign Windows CE (aptly known as 'WINCE') to history's great Recycle Bin, Bill Gates launches a new cut-down operating system. Sadly for Bill, his 'Small Windows Edition' becomes universally dubbed 'SWINE'.

September 2000

Trying to name their latest models, palmtop manufacturers realise they're running out of four letter words ending in "o" (Revo, Velo, Nino, Aero, etc.) Nokia launch the unimpressive "So-So" and the "Dodo", which is immediately rendered obsolete.

April 2001

At the Ideal Home Show, Phillips unveil a palmtop with an inbuilt fridge-freezer. Computer magazines describe its dimensions as "a little on the bulky side". Millions of gadget freaks rush to buy it, however, on the basis that having a little light come on when you open the case is "really cool" and you can stick magnets on the front to keep your Tesco Online shopping list handy.

August 2003

Wearable technology becomes the latest must-have. Communication devices are implanted in shoes, leading to coach-loads of irritating yuppies declaring "Yah, hi! I'm on the trainers". DonnaKaran unveils her Don-an-anorak range on the catwalks of Milan, including combat trousers with a pocket organiser to help you work out how many pockets you've got in your combat trousers. Posh Spice refuses to model a new stylus on the grounds that it makes her look fat.

December 2003

The first ultra-mobile office hits the streets, comprising a palmtop PC, folding keyboard, roll-up 14″ screen, micro-mini printer, wireless phone and 20GB of flash memory. The entire setup weighs less than a bag of sugar. The battery, however, is the size and weight of a small family car.

January 2004

HP's retro-style 'Yoko' is criticised for being ugly and tuneless and causing a rift between other members of the PDA family. Psion abandon plans to develop the 'Ringo' when they can't get the clock to stay in time.

March 2006

Genetic engineers create a human being with extra large hands and 15 fingers. Palmtop developers heave a sign of relief, and add yet more unnecessary features.

September 2006

Psion unveil the 'Pseudo', a sleek, chromium-plated empty case for swanky young executives to show off in meetings, without having the hassle of typing all their contact details into it only to find they can't make it work.

October 2007

In recognition of the new religion of PDA usage, a new National Holiday is declared - "Palm Sunday".

July 2008

In recognition of the reliability of such machines, Palm Sunday is immediately followed by another holiday: Crash Wednesday.

February 2009

A major breakthrough for text recognition software: the first system actually capable of decoding doctors' handwriting.

October 2010

Industry bigwigs agree to drop the term 'Pocket Computer' in favour of the more accurate 'Backpack Or Large Suitcase PC'. Rival manufacturers stop competing to make the smallest and begin boasting about whose is the biggest. Women sigh: "so what's new?"

January 247548

The first PDA with integrated cappuccino machine, bagless vacuum cleaner, nasal hair trimmer, cruise missile launcher, rotary clothes-airer, sunbed, sauna-and-solarium is launched. In their enthusiasm, engineers fail to notice that a bug has sent the date function completely haywire. The tiny minority of purchasers who actually notice this return their defective models, but are politely informed that the 12 month guarantee expired 24,500 years ago.

Debbie Barham is a TV scriptwriter, columnist and writer for magazines ranging from Computeractive to Cosmopolitan. She owns more handheld PCs than she has hands and is currently working on a major piece of humorous fiction: her 1999/2000 Tax Return.

Glossary

Application bar - The touch-sensitive strip along the edge of most EPOC screens, from which selected built-in applications can be launched.

Browser - Application for navigating the World Wide Web, running on any computer platform.

C++ - An efficient high level programming language now used for the majority of commercial EPOC applications. Much harder to learn than OPL, but more powerful and usually gives more compact, faster code.

CF - See **CompactFlash**.

Commercial software - Software produced by full-time programming companies, most often supplied in pre-packaged form.

CompactFlash - Small solid-state memory expansion modules, as used in all current EPOC devices except the Revo. See the 'Inside CompactFlash' feature in issue 17 of *Palmtop*.

Control panel - Invoked by pressing [Crtl]+[K] from the System screen on EPOC devices, showing a list of system control functions such as screen and keyboard settings, printer and dialling preferences, etc.

Crystal - A new category of EPOC communicators featuring half-VGA landscape format screen and full keyboard, due for release sometime in 2001.

Download - To transfer a file from an Internet web site or FTP site onto your palmtop or desktop computer.

EIKON - The 'front end' interface used on all current EPOC devices, that governs the position and appearance of menus, icons, dialog boxes, etc.

Embedding - The act of placing a Spreadsheet, Sketch, Sound object, etc. *within* another EPOC document.

Emulator - A program that mimics the operation of one computer operating system on another. PC-based emulators are available for both SIBO and EPOC devices.

EPOC - Term used to describe the operating system used on the Series 5 range of palmtops and all other current models. Not actually an acronym, EPOC was coined from 'Epoch', being touted as a new 'era' in handheld operating systems.

EPOC Connect - The name given to PsiWin when bundled with non-Psion devices such as those made by Ericsson and Oregon Scientific. Functionally almost identical to equivalent PsiWin versions.

ER1/ER2/ER3 - EPOC Release 1/2/3. The first major versions of the EPOC operating system, as employed on the original Series 5 'Classic' and Geofox One.

ER4 - EPOC Release 4. An update of the EPOC operating system employed only (to date) on the Oregon Scientific Osaris.

ER5 - EPOC Release 5. Currently the latest version of EPOC, as used on the Series 5mx, Series 7, netBook, Revo and Ericsson MC218.

Flash - Another term for 'flash memory' devices, such as **CompactFlash** and flash **SSD**.

Freeware - Software that is supplied or made downloadable free of charge. The author/programmer makes no charge for its use, but usually offers no warranties on its stability or performance.

FTP - File Transfer Protocol. FTP sites are sometimes used instead of World Wide Web

(WWW) sites as a repository for files and data and web content. Special 'FTP client' software is required to upload files to FTP sites.

Geofox One - The first non-Psion EPOC device, introduced in late 1997. Geofox ceased trading one year later after selling only around 1000 units. See issue 15 of *Palmtop* for a full review.

GPS - Global Positioning System. A GPS receiver is a small handheld device that can pinpoint your physical location anywhere in the world with an accuracy of a few metres, by triangulating its position from military satellites in orbit. Some GPS receivers can be connected to EPOC devices with suitable software and cables. See issue 19 for most recent coverage in *Palmtop*.

GSM - Global System for Mobile telecommunications. A widely adopted worldwide communications standard for mobile telephones. Most notably absent within the USA.

GUI - Graphical User Interface, such as the EIKON system used on EPOC devices, utilising windows, icons, menus, etc. Was preceded by the Command Line Interface (CLI), as used on DOS-based PCs of the 1970-80s.

Honda connector - The small flat connector used to plug an RS232 (Serial) cable into current EPOC devices.

HTML - HyperText Markup Language. The simple scripting system used to create World Wide Web (WWW) pages.

Icon bar - See **application bar**.

Infrared - Wireless communication technique used to transfer data between suitably equipped palmtops and printers/modems, etc. All EPOC devices are equipped with infrared capability.

IrDA - Infrared Data Association. A group set up to form standards for infrared data exchange, and the term used to describe the resulting standard currently employed. All EPOC devices conform to the IrDA standard, but earlier infrared-equipped Psion Series 3 devices do not, and are thus normally unable to communicate with other IrDA devices.

ISP - Internet Service Provider. Companies set up to provide Internet access via a dial-up system.

Java - A high level programming language designed to create programs that will run, without modification, on several computing platforms, such as PC, Macintosh, Unix and EPOC. See *Palmtop* issues 25-27 for a detailed feature on Java.

MacConnect - Psion's nearest EPOC equivalent to PsiWin for the Apple Macintosh, but offering only backup, restore and software installation, with no file conversions or synchronization.

Macro - A series of keystrokes, 'recorded' and 'played back' by a suitable utility program to automate commonly-performed tasks.

MBM - Multi BitMap. EPOC's standard picture format.

MC218 - Ericsson's 'clone' of the Series 5mx. Fully compatible with the Series 5mx and capable of running all software designed for the Series 5 range. Reviewed in *Palmtop* issue 24 and 26.

Message Suite - Psion's combined Email and Web applications for the Series 5 'Classic'.

Modem - Modulator/demodulator. Device used to convert computer data to/from

audible pulses that can be transmitted down a conventional telephone line. Required for Internet access from a palmtop.

netBook - Psion's 'vertical market' variant of the Series 7, with more memory and a faster processor. Featured in *Palmtop* issue 27.

Null modem adaptor - small box/connector used to connect two computers or devices such as a modem via an RS232 (Serial) cable by transposing the send/receive wires.

Object - Spreadsheets, Sketches, Sound files, etc. that are *embedded* within another EPOC document. See **embedding**.

OPL - Organiser Programming Language. The BASIC-like high level programming language built into most Psion devices, which can be programmed directly from all Psion devices except for the Revo.

OPX - An extension to OPL, providing extra functionality under EPOC.

Osaris - EPOC device produced by Oregon Scientific in 1999. The Osaris will not run many EPOC programs due to its small (320x200 pixel) screen. Reviewed in *Palmtop* issue 24 and 26.

Palmtop CD - PC and Macintosh compatible CD-ROM supplied free with *Palmtop* magazine subscriptions and containing virtually all non-commercial Psion-related software ever produced.

Parallel link - Cable for connecting EPOC computers to standard Parallel (Centronics) sockets as found on most PC-compatible printers.

PC-Card adaptor - Psion adaptor to allow connection to PC-Card modems, etc. Reviewed in *Palmtop* issue 11.

PCMCIA Card - Now known simply as 'PC-Card'.

Pearl - New category of EPOC smartphones, due for release in 2001.

Pixel - Term derived from 'picture element'. Refers to a single 'dot' on a computer screen.

POP3 - A common Internet mail protocol for downloading messages.

PsiMac - Psion's nearest Series 3 (SIBO) equivalent to PsiWin for the Apple Macintosh, but offering only backup, restore and software installation, plus Word and Sheet conversion.

Psion Organiser - Term coined with the appearance of Psion's first handheld 'organiser' device in 1984.

PsiWin - PC-based software that allows backup/restore, software installation, conversion of files and synchronization of certain data between Psion/EPOC devices and PCs.

Quartz - New category of EPOC devices featuring keyboardless operation, due for release later this year.

RAM - Random Access Memory.

Revo - The Revo was introduced in late 1999 as a cut-down and compact Series 5-like machine, with a non-backlit screen and no memory expansion capability.

ROM - Read Only Memory.

RS232 - Long-standing serial communications standard used for cable connections between all Psion/EPOC devices and desktop computers.

RTF - Rich Text Format. A common word processor file format supported by many word processing programs, and built into Psion Series 3 devices as a standard saveable/readable format.

SDK - Software Development Kit. A set of tools used for programming.

Serial cable - See **RS232**.

Series 3 - The first range of Psion palmtops to feature a QWERTY keyboard. First introduced in 1991, later models were the 3a, 3c

and 3mx, with the 3mx finally discontinued in late 1999.

Series 5 - The first Psion palmtops to feature the EPOC operating system, introduced in mid-1997.

Series 7 - Introduced in late 1999 as a handheld/laptop hybrid, featuring colour screen and both CF and PC-Card expansion slots. Reviewed in *Palmtop* issue 25 and 27.

Shareware - Software that can be freely copied or downloaded for a fixed evaluation period, after which the software should be paid for. Shareware 'registration' fees generally range from £5-£25.

SIBO - Now refers to the operating system used by the Series 3 range of Psion palmtops. An acronym of 'SIngle Board Organiser'.

Siena - Introduced in 1996 as a cut down Series 3 device with a half-width screen and no memory expansion capabilities.

Silk-screen - The touch-sensitive area around the screen edge of EPOC devices, includes the menu, infrared, clipboard and zoom command icons.

SIS - Software Installation System. A means of installing software to an EPOC device via a single, self-extracting file.

SMS - Short Messaging Service. Used to send text messages up to 160 characters in length via the GSM telephone network.

SMTP - Simple Mail Transfer Protocol. A common Internet mail protocol for sending messages.

SSD - Solid State Disk. Proprietary storage 'card' devices used to expand the capacity of the Series 3 range of palmtops.

Symbian - A joint venture between Psion, Nokia, Ericsson, Motorola and other major telecommunications/computing companies to develop the EPOC standard and its derivatives.

System folder - A hidden folder present on all EPOC devices and containing numerous system settings/configuration files and all installed add-on software. See 'Inside the System folder' in *Palmtop* issue 28 for more details

System screen - The equivalent of a PC 'desktop' on Psion/EPOC devices. Accessed from EPOC by pressing the 'System' silk-screen button.

Toolbar - The strip of software buttons present down one side of the screen within most EPOC applications.

Upload - To transfer a file to an Internet web site or FTP site from your palmtop or desktop computer.

URL - Uniform Resource Locator. Essentially the unique address of an Internet web or FTP site.

WAP - Wireless Application Protocol. A system for delivery of Internet content to handheld devices.

Web - Abbreviated form of 'World Wide Web', the graphical system of hypertext pages published on the Internet.

Zip - A compressed file format used widely on PCs and commonly adopted on Psion/EPOC devices.

For a more comprehensive list of article cross-references, see the Palmtop index, supplied on all Palmtop CDs, or freely downloadable from www.palmtop.co.uk .

Next issue...

Planned for issue 30:

- Connecting your EPOC palmtop to the Internet. Part one of a new definitive up-to-date guide
- Printers and printing without a PC
- Large capacity storage solutions for your EPOC computer, from giant CF disks to miniature hard disks
- Working with Word—part 2
- EPOC Emulation revisited—a palmtop on your desktop computer
- Genealogy on your Psion—track your family tree with your palmtop
- Speed up your text entry in Word and elsewhere...
- Managing your book, video or CD collection
- A new series covering electronic books for your palmtop computer
- Memory and software upgrades for the Psion netBook and Series 7
- Working for a living: the Financial Consultant
- Getting along with RMRZip
- Connecting your Psion to a Linux computer

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